

GOVERNMENT OF INDIA
DEPARTMENT OF ARCHAEOLOGY
**CENTRAL ARCHAEOLOGICAL
LIBRARY**

CALL No. 901.09352 Pal

D.G.A. 79.

On L. HAR

77

C 132



THE ANTIQUITY OF IRAQ

A HANDBOOK OF ASSYRIOLOGY

By the same Author:

- Mandaean Studies* (Revised Edition 1926).
The Babylonian Akitu Festival (1926).
Essay on Mandaean Bibliography 1560-1930 (1933).
Chronology of the Shub-ad Culture (1941).
Babylonisk Kultur (1948). [Danish].
The History of Babylon 538-93 B. C. (1953).
Early Exploration in Mesopotamia (1954).
The Revision of the Hammurabi Chronology (1956).

Reference Book
Not to be issued out

THE ANTIQUITY OF IRAQ

A HANDBOOK OF ASSYRIOLOGY

BY

SVEND AAGE PALLIS, M. A., PH. D.

Professor in the University of Copenhagen

6521



901.09352
Pal

Ref 913.352
Pal

COPENHAGEN
EJNAR MUNKSGAARD, LTD.
1956

The Author tenders respectful thanks to two Danish institutions:
The Carlsberg Foundation, whose financial aid has rendered possible
the printing of this work, and the Rask-Orsted Foundation, which has
partly defrayed the expenses of the translation into English.

CENTRAL ARCHAEOLOGICAL
LIBRARY, NEW DELHI.

Acc. No. 6521.

Date..... 17/8/57.

Call No. 901.09352/Pal.

PREFACE

As will appear from the detailed table of contents, this book attempts to give an account of all the various branches of learning included under Assyriology. At the end of the road no one can feel more strongly than myself that the task may perhaps be said to be pretty vast for a single author to undertake. My excuse is my great love of Assyriology, sustained and augmented by more than 40 years' constant study. Never to be forgotten are my impressions from the reading of A. H. Layard's early experiences in his *Early Adventures* (1887), as also the whole atmosphere and enthusiasm of his *Nineveh* (1848¹-49) and his *Discoveries* (1853); a life-long nostalgia, which did not find relief until 1951, was then born in a young man's mind. And it is my hope that my book may be found serviceable until a group of Assyriologists undertake the production of a much more extensive and better Handbook of Assyriology.

At the same time I would like to emphasise that my work is not meant to be an encyclopedia; I have not tried—any more than in the *Literature* (pp. 747 ff.)—to register everything that has been written on this or that Assyriological subject. But I give what seems essential to me, so that this book fully represents my own view and evaluation of Mesopotamian prehistory, chronology, history, culture, religion, and languages.

While writing Chapters II-III and VI I have throughout verified dates and years so far as it was within the limits of possibility. This very time-consuming verification was necessary because misprints or inaccuracies often marked earlier works on the history of decipherment and excavation.

What I may have acquired of archaeological insight I owe partly

¹ Cf. Sampson Low, *The English Catalogue of Books 1835-1863* (1864), p. 447; *Encyclopædia Britannica*, 10. ed. XXX (1902), p. 171; and H. A. Bruce, 1st Baron Aberdare in A. H. Layard, *Early Adventures* . . . (New. ed. 1894), p. 11.

to a study of Augustus Henry Pitt-Rivers' masterly work *Excavations in Cranborne Chase, near Rushmore, on the Borders of Dorset and Wilts.* (1887-08, especially Vols. 1-2, 1887-88), and partly to a journey of investigation to Iraq in the winter of 1951, when I examined important sites such as Arpachiyah, Assur, Babylon, Birs Nimrûd, Dûr-Kuri-galzu, Gawra, Hassuna, Khorsabad, Kish, Kuyûnjik, Matarrah, Nimrûd, Nippur, Tell Abû Harmal, Tell 'Ukair, and Ur. On the Chemchemal Plain, on the foothills of the spurs of the Zagros Mountains, Sagirma Dagh, I studied actual digging in progress at Kâl'at Jarmo in January under Robert J. Braidwood's highly expert leadership and instruction. During the last revision of my results it has been a constant help to me to gather further information from André Parrot's *Archéologie mésopotamienne II: Technique* (1953) and especially from Sir Mortimer Wheeler's *Archaeology from the Earth* (1954), information which can be traced directly or indirectly in Chapter VI.

This book was written after my return from Iraq in the period from October 21, 1951 to January 25, 1955, but after December 31, 1954 it has only in a few instances been possible for me to incorporate fresh matter or knowledge in my exposition. A popular account published in Danish in 1948, entitled *Babylonisk Kultur* (355 pages) was the external incitement for the preparation of a far more extensive scientifically documented and revised work, which has now come to a conclusion. As to the translation into English I am greatly indebted especially to Miss Annie I. Fausbøll, M.A., and to Mr. Niels Haislund, M.A. (Chapters VI-VII), who both of them also have assisted me in reading the proofs. Chapters II and VIII have in part been published before.

Finally I would here mention, in respectful and grateful memory, the name of Antonius Deimel, whose *Vollständige Ideogramm-Sammlung* Bd. 1-4 (1928-33; *Šumerisches Lexikon* II. Teil) has been daily in the hands of all Assyriologists during the last 25 years, affording them invaluable aid and enlightenment. The hours in Piazza della Pilotta, Rome, were unforgettable, because Antonius Deimel was a mild and warm-hearted personality, representing the ideal scholar, who understood, in spirit and in truth, that we Assyriologists all form a brotherhood who serve the same great cause to the extent that our gifts allow.

Copenhagen, 25. January 1955.

SVEND AAGE PALLIS.

CONTENTS

Preface.....	V
Contents.....	VII
Addition to pp. 306 and 308	XIII
Transliteration	XIII
Abbreviations	XIV
Quotation Marks of Collections of Cuneiform Tablets.....	XVI

CHAPTER I: THE LANDSCAPE

§ 1. Babylonia	1
§ 2. Euphrates and Tigris.....	4
§ 3. Irrigation and Canals	7
§ 4. Assyria	11
§ 5. Climate	13
§ 6. Fauna and Flora	15
§ 7. Export and Import Trade.....	17

CHAPTER II: EARLY EXPLORATIONS

§ 1. The Fate of Nineveh.....	19
§ 2. The City of Babylon after 538 B. C.: Achaemenians, Diadochi, Seleucids, and Arsacids. Topographical Statements of Classical Authors.....	20
§ 3. The Rediscovery of Nineveh	41
§ 4. The Rediscovery of Babylon	43
§ 5. Detailed Descriptions and small-scale Excavations: (1) Nineveh (C. J. Rich 1820-21); (2) Babylon (Pietro della Valle 1616, J. de Beauchamp 1784, C. J. Rich 1811, 1817, R. Mignan 1827)	46
§ 6. The Cuneiform Inscriptions: Pietro della Valle 1621 (publ. 1658), Thomas Herbert 1677, S. Flower 1693.....	55
§ 7. Babylonian Antiquities and Inscriptions in Museums and in private Collections before 1847	64
§ 8. Chronological List of the Assyro-Babylonian Cuneiform Texts published before 1851	70
§ 9. Topographical List of Old Persian and Susian Cuneiform Inscriptions	87
§ 10. Conclusion	92

VIII

CHAPTER III: THE DECIPHERMENT OF THE CUNEIFORM WRITING

A. The Old Persian Inscriptions	94-123
§ 1. Pietro della Valle 1621 (publ. 1658), C. Niebuhr 1778, Fr. Münter 1800, A. I. Silvestre de Sacy 1793	94
§ 2. O. G. Tyehsen 1798, Fr. Münter 1800, G. F. Grotefend 1802-03, 1805; A. J. Saint-Martin 1822 (publ. 1823), R. Rask 1823	97
§ 3. E. Burnouf 1836, Chr. Lassen 1836	105
§ 4. Henry Creswicke Rawlinson: 1836 (18 values), "Memoir of 1839", <i>JRAS</i> X (1846-47); E. Jacquet 1838, Ed. Hincks 1846 (publ. 1848), J. Oppert 1847	108
B. The Susian Inscriptions	123-132
§ 5. Nomenclature. G. F. Grotefend 1802, 1837, N. L. Westergaard 1845, Ed. Hincks 1846 (publ. 1848); H. C. Rawlinson 1847, Ed. Norris 1855	123
C. The Assyro-Babylonian Inscriptions	132-187
§ 6. Varieties of Scripts. The Language is Semitic (C. Bellino 1820)	132
§ 7. A. A. H. Lichtenstein 1801, G. F. Grotefend 1837, I. Löwenstern 1845, 1847, Ed. Hincks 1846 (publ. 1848), 1848, P. É. Botta 1847-48, F. C. de Sauley 1847-55	137
§ 8. Ed. Hincks 1848, 1850, H. C. Rawlinson 1850, 1851	149
§ 9. Vindication of the Decipherment. Short History of Assyriology: J. Oppert 1859, <i>The Cuneiform Inscriptions of Western Asia</i> 1861-84, Fr. de Lenormant 1877 (Syllabaries), <i>Cuneiform Texts</i> ... 1896 ff. - List of Signs: R. E. Brünnow, Ch. Virolleaud, Ch. Fossey, B. Meissner, G. Howardy, A. Delmel, R. Labat. - Lexicography: Ed. Norris, Fr. Delitzsch, W. Muss-Arnolt, C. Bezold. - Grammars: Fr. Delitzsch, A. Ungnad, W. von Soden	159
§ 10. Rise and Progress of Sumeriology: H. C. Rawlinson 1855, Fr. de Lenormant 1873-79, the Halévy Episode 1874-89, P. Haupt 1879, 1881-82, R. E. Brünnow 1889, C. F. Lehmann 1892. Grammatical and Lexicographical Publications in the 20. Century (St. Langdon, Fr. Delitzsch, A. Poebel, C. J. Gadd, A. Delmel, R. Jestin. - B. Landsberger)	175
§ 11. Alphabetical List of the Chief Localities where Assyro-Babylonian and Sumerian Texts have been found; their Chronology	185

CHAPTER IV: THE CUNEIFORM SCRIPT

§ 1. The Pictographic Theory: J. Oppert 1859, Fr. Thureau-Dangin 1898	188
§ 2. Fr. Delitzsch 1897	191
§ 3. G. A. Barton 1913, A. Delmel 1922, 1929, 1928-33, 1939, A. Falkenstein 1936	192
§ 4. How the Cuneiform Script was Written	199
§ 5. Characterisation of the Akkadian Cuneiform Script	200

IX

CHAPTER V: THE LANGUAGES

§ 1. Akkadian	205-231
A. The Akkadian Languages	205
B. Relation to Sumerian	208
C. Relation to West Semitic	209
D. General Characterisation of Akkadian in Contrast with other Semitic Languages	210
E. Phonetics	211
I. Vowels	211
II. Consonants	212
III. The Laryngeals and Akkadian Accentuation	216
IV. Vowel Changes	216
V. Consonantal Changes	218
F. Morphology and Accidence	219
I. Pronouns	219
II. The <i>ša</i> -Relative	220
III. Nouns	221
IV. Verbs	221
1. Verbal Stems	223
2. Tenses	226
3. Inflection	228
4. Moods	229
5. The Ventive	229
G. Dialectal Differences	232-265
§ 2. Sumerian	232
Affinity of the Sumerian Language	233
General Characterisation	234
I. The Word Stems	235
II. Vowel and Consonant Sounds	236
III. Sound Laws	238
IV. Phonetics	240
V. Dialects	242
VI. Morphology and Accidence	242
A. Nouns	244
B. Personal Pronouns and Personal Suffixes	245
C. Verbs	245
a. The "Verbal Chain"	246
b. The Prefixes <i>ga-</i> , <i>he-</i> , <i>u-</i> , <i>nu-</i> , <i>nam-</i> , <i>ba-ra-</i>	246
c. Affixes (Suffixes)	247
d. <i>-e</i> , <i>-ed</i>	250
e. Infixes	253
f. The Verbal Prefixes	265
Conclusion	265

CHAPTER VI: THE EXCAVATIONS 1842-1954

A. Historical and Methodological	266-330
§ 1. Introduction. J. de Beauchamp; C. J. Rich; Jules Mohl and P. É. Botta; A. H. Layard	266

§ 2. The Excavators and the Turkish and Iraqi Governments...	270
§ 3. The Excavators and the Natives of Mesopotamia.....	281
§ 4. English and French Excavators in Mesopotamia.....	288
§ 5. Economic Difficulties. Size of some Excavation-sites. Number of Workmen. Difficulties of Transport and of the Climate...	293
§ 6. Mistakes of the First Generations of Excavators	303
§ 7. Methods of Modern Mesopotamian Excavation.....	313
B. Characterisation of the Mesopotamian Excavations.....	330-340
§ 1. 1842-1917	330
§ 2. 1918-1939	331
§ 3. 1939 ff.	338
C. Chronological List of Excavation Sites 1842-1954	340-384

CHAPTER VII: THE PREHISTORY OF IRAQ

§ 1. The Study of the European Palaeolithic 1838 ff.	385
§ 2. Commentary on our Prehistoric Schematic Synopsis	386
§ 3. The Middle East in Prehistory.....	389
§ 4. The Mesopotamian Palaeolithic: Barda Balka, Hazer Merd and Shanidar D, Shanidar C, Hazer Merd (top layer), Zarzi, and Palegawra	390
§ 5. The Mesopotamian Neolithic	395
§ 6. Karim Shahr, Kal'at Jarmo	398
§ 7. Tell Hassuna, the Sāmarrā Painted Pottery	401
§ 8. Tell Halaf, Tell Arpachiyah.....	407
§ 9. Erldu (1946-49), the Ubaid Pottery	412
§ 10. The Warka Culture	422
§ 11. The Early Dynastic Period	432
§ 12. Tentative relative and absolute Prehistoric Chronology	434
§ 13. Survey of the Results of the Investigations in §§ 5-12.....	439
§ 14. The Prehistoric Mesopotamian Interrelations	440
§ 15. The Prehistoric Inhabitants of Mesopotamia.....	447
§ 16. The Subarials	449
§ 17. Sumerians and Semites	452
§ 18. Conclusion	460

CHAPTER VIII: CHRONOLOGY

§ 1. The Marl Archives. W. F. Albright 1938, D. Sidersky 1940..	463
§ 2. Excavations at Tell 'Aṣṣhānah. Sidney Smith 1940.....	466
§ 3. The Khorsabad List. A. Poebel 1942-43.....	471
§ 4. Fr. Thureau-Dangin 1942 (publ. 1951), A. Goetze 1948, 1951, E. Unger 1953	474
§ 5. Sidney Smith 1945.....	479
§ 6. B. Landsberger 1954	481
§ 7. From Amurru to Ur I	482
§ 8. The Periods prior to Ur I.....	484

CHAPTER IX: FROM SUMERIAN CITY GOVERNMENT TO BABY- LONIAN EMPIRE

§ 1. Earliest historical Records. Ur I, Lagash, the Kishlotes, the Awanites, Lugal-zaggisi	485
§ 2. The Sumerian City Government: the City God, the Patesi, and the Temple.....	488
§ 3. The Patesi and the Theocratic City-state, the Officials, the Citizens, and the Laws	492
§ 4. Lugal-zaggisi and the Central Administration of Sumer.....	496
§ 5. The Agade Dynasty (Sargon, Rimush, Manishtusu).....	498
§ 6. Naram-Sin	501
§ 7. Gutium, Ulu-lugal	504
§ 8. Ur III, the Deification of the Rulers	506
§ 9. The Isin-Larsa Period	509

CHAPTER X: HAMMURABI AND HIS AGE

§ 1. Sumu-abum, Sumu-la-ilm	515
§ 2. Hammurabi's Army	517
§ 3. Civil Administration, the Officials. - Autocracy in the Secular State	518
§ 4. <i>awltû</i> , <i>muškēnu</i> , and <i>wardû</i> . - Private Ownership.....	523
§ 5. The Code of Hammurabi: Introduction (i. a. Codex Ur-Nammu Codex Lipit-Ishtar, Codex Eshnunna), Dating, and General Characterisation	528
§ 6. The Legal Procedure in the Courts (§§ 1-5).....	534
§ 7. Proprietary Rights (§§ 6-25)	536
§ 8. Military Laws (§§ 26-41).....	538
§ 9. Agricultural Laws (§§ 42-65)	539
§ 10. Commercial Laws (§§ 100-107)	541
§ 11. Ale- and Wine-houses (§§ 108-111).....	542
§ 12. Debts and Deposits (§§ 112-126)	543
§ 13. Family Laws (§§ 127-161)	544
§ 14. Laws of Inheritance and Dowry (§§ 162-184).....	552
§ 15. Laws of Adoption (§§ 185-194)	557
§ 16. Penni Code (§§ 195-214)	559
§ 17. Laws of Wages (§§ 215-277)	561
§ 18. Slave Laws (§§ 278-282)	564
§ 19. The Religious Centralisation: Marduk; Ishtar	568
§ 20. The First Babylonian Dynasty after Hammurabi. The Sea-Land Dynasty, the Kassites and the Hittites	574

CHAPTER XI: THE ASSYRIANS

§ 1. History up to ca. 1700 B. C.	577
§ 2. Kül Tepe: Language, Calendar, the <i>limmu</i> System.....	581
§ 3. The Assyrian Monarchy, the King, the Court Officials.....	589

XII

§ 4. The Army; Wars and Spoils	596
§ 5. The Government Officials	603
§ 6. Finances	605
§ 7. Laws	608
§ 8. History down to c. 1380: a Certain Shamshi-Adad, the III- lites, Mltanni, Egypt	613
§ 9. C. 1380-911: Ashur-uballiṣ, Shalmaneser I, Tukulti-Ninurta I, Nebuchadnezzar I of Babylonla, Tiglathpileser I	617
§ 10. 911-745: Adad-nirāri II, Ashurnasirpal II, Shalmaneser III, Sammuramat (Semiramis)	621
§ 11. 745-705: Tiglathpileser III, Sargon II	624
§ 12. 705-681: Sennacherib	628
§ 13. 680-626: Esarhaddon, Ashurbanpal	630
§ 14. The Neo-Babylonian Dynasty 625-538. The Fall of Nineveh 612. Nebuchadnezzar II, Nabonidus	632
§ 15. Cyrus. The Fall of Babylon 538.	634

CHAPTER XII: THE TOWN AND DAILY LIFE

§ 1. Houses and Streets	636
§ 2. The City of Babylon	642
§ 3. Measures of Length, Area, Capacity, and Weight. Kassite and Neo-Babylonian Measures of Area. The Farmers	649
§ 4. Trade	660
§ 5. The Crafts	663
§ 6. Dresses, Hair-dressing, and Beard-dressing	665
§ 7. Furniture	668
§ 8. Food	668
§ 9. Ethics and Religion. The Evil Demons	670
§ 10. Death. The Adapa Myth and the Gilgamesh Epic	675
§ 11. Beerhouses and Brothels	679
§ 12. The Funerary Ritual. Graves	682
§ 13. <i>irṣit lá tārī</i>	686

CHAPTER XIII: SACRIFICES AND FESTIVALS

§ 1. Main Features of the Assyro-Babylonian Religion. The <i>aklū</i> Festival	688
§ 2. Semitic Influence: Ishtar; the Movements of the Stars	694
§ 3. Marduk	695
§ 4. Man's Relation to the Gods. The Priesthood. Sacrifices and Festivals	697
§ 5. The Temple, the <i>ziggurat</i> , the <i>bīt aklū</i>	699
§ 6. The Inner Core of Babylonian Urban Religion. The Patron Deities, the Ritual Exorcism	705

CHAPTER XIV: ART, LITERATURE, AND SCIENCES

§ 1. Art	712
§ 2. Literature, Religious and Profane. Ashurbanipal's Library ..	722

XIII

§ 3. The Scholastic Texts	728
§ 4. Medicine	734
§ 5. Calendar. Astronomy. Astrology	736
§ 6. Mathematics	740
§ 7. Music	744
Literature	747
Index of Names	771
Index of Authors	801
Maps	
No. 1—The Kingdom of Iraq	
No. 2—Near and Middle East: Ancient Sites	
Prehistoric Schematic Synopsis	
I. Pleistocene—Holocene 1	
II. Holocene 2	

Addition to pp. 306 and 308:

The revised Iraqi *Antikal* Act (1936), Section 43 demands the presence of "an epigraphist possessing the necessary knowledge of ancient languages and scripts".

TRANSLITERATION

Sumerian: Antonius Delmel's transliteration (*SL*) has been adopted, e. g. *k* instead of *q* and *gu*₁, *gn*₂ instead of *gû*, *gû* (F. Thureau-Dangin; *CAD*). René Labat, *Manuel*... (1952) has been consulted as to some of the index numbers. E. g. *ni:ni-in* denotes that *ni* alternates with *ni-in*. Following the English tradition (S. Langdon, C. J. Gadd) and *RLA* Sumerian texts are printed in *Italics*.

Akkadian: The transliteration of Wolfram von Soden, *Das akkadische Syl-labar* (1948) has been adopted. But I write *k* and e. g. *ša*₂, *ša*₃ instead of *q*, *šû*, *šâ*; *U*₃ as a sort of copula I transliterate *û* (A. Ungnad), perhaps the sound value was *u*; *d* denotes a long vowel, *â* a short vowel < a long vowel.

In direct quotation from other enquirers I have adopted the transliteration used in the publication cited in the note.

As regards proper names I write in an English context, following the English tradition in Assyriology, e. g. Ashurbanipal, Esarhaddon, Hammurabi, Ishtar, Nebuchadnezzar, Sennacherib, Salmianeser, Shamash, Tiglathpileser, ziggurat, etc., and write Ashur to designate the god, Assur to denote the city.

As to the modern Arabian and Turkish place-names I most frequently follow the English spelling, e. g. Al Jazira, Carchemish, Chagar Bazar, Falûja, Hili-lah, Kuyunjik, Muqayyar, Qasr, Senjirli, Tell Halaf. But in the Preface and in pp. 340–384 a linguistically more exact spelling is used, e. g. Kuyûnjîk.

ABBREVIATIONS

- AAA: *Annals of Archaeology and Anthropology*.
 AB: *Assyriologische Bibliothek*.
 AJ: *Antiquaries Journal*.
 AJA: *American Journal of Archaeology*.
 AJSL: *American Journal of Semitic Languages and Literatures*.
 AK: *Archiv für Keilschriftforschung*.
 AKA: E. A. Wallis Budge and L. W. King, *Annals of the Kings of Assyria* ... I (1902).
 AKM: *Abhandlungen für die Kunde des Morgenlandes*.
 An.Or.: *Analecta Orientalia*.
 AOF: *Archiv für Orientforschung*.
 AS: *The Oriental Institute of the University of Chicago. Assyriological Studies*.
 BA: *Beiträge zur Assyriologie*.
 Bab.Exp.: *The Babylonian Expedition of the University of Pennsylvania*.
 BASOR: *Bulletin of the American Schools of Oriental Research*.
 Bezold, Bab.-ass.Lit.: Carl Bezold, *Kurzgefasster Überblick über die babylonisch-assyrische Literatur* ... (1886).
 BOR: *Babylonian and Oriental Record*.
 CAD: *The Assyrian Dictionary of the Oriental Institute of the University of Chicago* ... Vol. 6: H (1956).
 CAH: *The Cambridge Ancient History*.
 Chronology: S. Palls, *Chronology of the Shub-ad Culture* (1941).
 Cod. Hamm.: *The Law Code of Hammurabi (Codex Hammurabi)*.
 CT: *Cuneiform Texts from Babylonian Tablets, etc., in the British Museum*.
 E. D.: *Early Dynastic*.
 e-S: *eme-SAL*.
 Gött. gelehr. Anz.: *Göttingische gelehrte Anzeigen*.
 Harper: R. F. Harper, *Assyrian and Babylonian Letters* ... I-XIII (1892-1913).
 Iraq: *Iraq. Published by the British School of Archaeology in Iraq (Gertrude Bell Memorial)*.
 JAI: *Journal of the Anthropological Institute*.
 JAOS: *Journal of the American Oriental Society*.
 J.As.: *Journal Asiatique*.
 JCS: *Journal of Cuneiform Studies*.
 JHS: *Journal of Hellenic Studies*.
 JNES: *Journal of Near Eastern Studies*.
 JPOS: *Journal of the Palestine Oriental Society*.
 JRAS: *Journal of the Royal Asiatic Society*.
 JRGS: *Journal of the Royal Geographical Society*.
 JSOR: *Journal of the Society of Oriental Research*.
 KAR: Erich Ebeling, *Keilschrifttexte aus Assur reilgelösen Inhalts* I-II (19(15-)-19, 1920-23; WVDOG XXVIII and XXXIV).
 KB: *Keilschriftliche Bibliothek*.
 King, L. W., *Chronicles* ...: L. W. King, *Chronicles concerning Early Babylonian Kings, including Records of the Early History of the Kassites* ... I-II (1907; *Studies in Eastern History* II-III).

- Layard, *Discoveries*: Austen H. Layard, *Discoveries in the Ruins of Nineveh and Babylon* ... (1853).
- Layard, *Nineveh*: Austen Henry Layard, *Nineveh and its Remains* ... (1848-49, 2 vols.).
- LSSSt: *Leipziger Semitistische Studien*.
- MAOG: *Mitteilungen der Altorientalischen Gesellschaft*.
- MDOG: *Mitteilungen der Deutschen Orient-Gesellschaft*.
- MJ: *University of Pennsylvania. The Museum Journal for Art, for Science, for Civilization, Published by the University Museum*.
- MSL: *Materialen zum sumerischen Lexikon*.
- MVAG: *Mitteilungen der Vorderasiatisch-ägyptischen Gesellschaft*.
- Neb.: *Nebuchadnezzar*.
- OECT: *Oxford Editions of Cuneiform Texts*.
- OIC: *Oriental Institute Communications*.
- OIP: *Oriental Institute Publications*.
- OLZ: *Orientalistische Literaturzeitung* (sometimes: *Literatur-Zeitung*).
- PBS: *University of Pennsylvania. The Museum. Publications of the Babylonian Section*.
- PG: *Predynastic Grave(s), Royal Cemetery at Ur*.
- PSBA: *Proceedings of the Society of Biblical Archaeology*.
- I-V R: H. C. Rawlinson, *The Cuneiform Inscriptions of Western Asia* (1861-84, 5 vols.).
- RA: *Revue d'Assyriologie*.
- RArch.: *Revue Archéologique*.
- Rassam, *Asshur*: Hormuzd Rassam, *Asshur and the Land of Nimrod* ... (1897).
- RLA: *Reallexikon der Assyriologie* ... (19(28)32-38, 2 vols.).
- S^a, S^b, etc.: see Chapter XIV § 3.
- SAK: F. Thureau-Dangin, *Die sumerischen und akkadischen Königsinschriften* (1907; VAB I).
- SAOC: *The Oriental Institute of the University of Chicago. Studies in Ancient Oriental Civilization*.
- SIS: *Seal-Impression Stratum (Strata), Ur*.
- SL: Anton Delmel, *Sumerisches Lexikon* (1925-37, 7 vols.).
- Sumer: *Sumer. A Journal of Archaeology in Iraq*.
- TCL: *Textes cunéiformes, Musée du Louvre, Département des Antiquités Orientales*.
- TRIA: *Transactions of the Royal Irish Academy*.
- TSBA: *Transactions of the Society of Biblical Archaeology*.
- UVB: *Vorläufiger Bericht über die ... in Uruk-Warka unternommenen Ausgrabungen* (1930 ff.).
- VAB: *Vorderasiatische Bibliothek*.
- VS: *Vorderasiatische Schriftdenkmäler der Königlichen Museen zu Berlin*.
- WVDOG: *Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft*.
- WZKM: *Wiener Zeitschrift für die Kunde des Morgenlandes*.
- ZA: *Zeitschrift für Assyriologie*.
- ZÄS: *Zeitschrift für ägyptische Sprache* ...
- ZDMG: *Zeitschrift der Deutschen Morgenländischen Gesellschaft*.
- ZKM: *Zeitschrift für die Kunde des Morgenlandes*.

QUOTATION MARKS OF PRINCIPAL COLLECTIONS OF CUNEIFORM TABLETS

(followed by Registration Number).

- A: Collections of The Oriental Institute Museum, University of Chicago.
AO: Antiquités Orientales, Musée du Louvre, Paris.
Ass. (Assur), see VA.
BE: [Deutsche Expedition nach Babylon.] Quotation mark for some of the cuneiform tablets in the museums of Berlin.
BM: British Museum, London; often omitted and only the registration number is stated, e. g. 17298; 82-5-22, 168.
Bo: Boghazkeul Tablets, Berlin.
⊕: R. E. Bowler Collection, BM.
Bu: E. A. Wailis Budge Collection, BM.
C. (Constantinople), see MIO.
CBM, see CBS.
CBS: Catalogue of the Babylonian Section, University Museum of the University of Pennsylvania, Philadelphia.
DCL: Tablets from Drehem in the Public Library of Cleveland, Ohio.
DT: Daily Telegraph Collection, BM.
EAH: E. A. Hoffman Collection, General Theological Seminary, New York.
IM: Collections of the Iraqi Museum Baghdad.
K.: Konyunjik Collection, BM.
Kh: Khabaza Collection, University Museum of the University of Pennsylvania, Philadelphia.
Kh: Khafajah Tablets, The Oriental Institute Museum, University of Chicago.
KI: L. W. King Collection, BM.
Kish, see W-B.
MAH: Collections of the Musée d'Art et d'Histoire, Geneva.
MIO: Collections of the Musée Impérial Ottoman, Constantinople.
MLC: J. P. Morgan Library Collection, New York.
MNB: Monuments de Ninive et de Babylone, Louvre, Paris.
NBC: James B. Nies Babylonian Collection, Yale University, New Haven.
N.: Nippur Tablets, University Museum of the University of Pennsylvania, Philadelphia.
NI. (Nippur): Quotation mark for some of the cuneiform tablets in the Istanbul Archaeological Museum of the Ancient Orient, Istanbul.
NT: Nippur Tablets (1948 ff.), The Oriental Institute Museum, University of Chicago.
Rm: Hormuzd Rassam Collection, BM.
SA: Collection of Les Pères Blancs de Sainte-Anne, Jérusalem (cf. *RA* IX, 1912).
S.: Sippar Collection, Musée Impérial Ottoman, Constantinople.
Sm: George Smith Collection, BM.
SMN: Nuzu Tablets, Semitic Museum, University of Harvard, Cambridge, U.S.A.
Sp: Spartoi Collection, BM.
U.: Ur Tablets (Baghdad; London, BM; Philadelphia).
VA, VAT(h): Vorderasiatische Abteilung, T(h)ontafeln, Staatliche (sometime: Königliche) Museen zu Berlin.
W.: Warka Tablets (Baghdad; Berlin).
W-B: Herbert Weld-Blundell Collection, Ashmolean Museum, Oxford.
YBC: Yale Babylonian Collection, Yale University, New Haven.

CHAPTER I

THE LANDSCAPE

§ 1. The ancient civilisations of Mesopotamia are grouped round the two great rivers Euphrates and Tigris. In a narrow strip of land along these, approximating in extent to the area of the Nile in Egypt from the first cataract to the Mediterranean, a number of sites have been discovered, during the last hundred years, of cities which have been centres of the cultivated soil. The land gained between the two rivers comprises two different landscapes which have alternately taken the cultural and more particularly the political lead, the shifting of the power being dependent partly on the physical conditions, partly on historical and ethnical constellations.

The present political unit, the kingdom of Iraq, includes both these landscapes, named to the north Assyria, to the south Babylonia, respectively. These names are generally known to laymen as well as scholars, who are both aware that Babylon is often used for Babylonia, though properly it is merely the name of the capital of the kingdom in the south. By Mesopotamia moderns mean the whole area between the Euphrates and the Tigris, whereas classical authors by this term meant only the landscape between the Sinjar Heights and the place, on a level with Falûja and Baghdad, where the two rivers first approach each other, identical with Al Jazīra, "the island", of the Arabs. While Assyria extends along the upper Tigris, between its tributary the Lesser Zâb and Khorsabad, our Babylonia is identical with lower or southern Mesopotamia, a landscape called by the ancients *Χαλδαία*, Chaldaea. The Greeks learnt the name as well as its geographical meaning from the Assyrians.

The ancient landscape of Babylonia had not, however, the extension indicated in a modern map if we follow southern Mesopotamia with the eye along a line from Falûja-Baghdad to the Persian Gulf. This geographical distance has steadily increased through thousands of

years, southern Mesopotamia being alluvial land deposited in the course of time by the Euphrates and the Tigris, and their affluents. On the basis of our knowledge of the changes in the relation between the Persian Gulf and southern Mesopotamia in historical times it has been considered a safe conjecture that the prehistoric borderline between sea and land lay on a line between Hit and Samarra. Of facts may be pointed out that about 3000 B.C. Eridu was situated near the sea, while at Uruk (Erech) there was somewhat earlier a difficulty in giving the damp soil the firmness required for large building operations. Further it may be mentioned that south and east of Eridu no mounds with ruins have been found, which shows that the landscape between the Euphrates, Tigris, and Shatt el-Hai has come into existence later, is younger than the Babylonia of antiquity. The cities of Eridu - Ur - Lagash thus denote approximately the coast-line about the year 3000. At the time of Sennacherib (705-681) the coast-line had advanced much further so that the tract between Eridu and modern Kurnah, where the Euphrates and Tigris unite, formed a lagoon which the ruler crossed in one of his raids on Elam. And in the 4th century B.C. the present Mohammera, the Chorax of the ancients, lay by the sea, while the waters of the Tigris, the Elamite rivers Kerkha (Choaspes) and Karûn (Pasitigris), and the Euphrates united in a lagoon which Nearchos, the admiral of Alexander the Great, calls "the Chaldaean Sea", the width of which, according to Arrianus and Strabo, he estimates at 600 stadia (111 km).

Thus the whole landscape of Babylonia from prehistoric times up to now has been formed of the deposits of the rivers, more particularly of the Euphrates. And we may add that the process has taken place rapidly even measured by millennia. Eridu, the oldest port known to us, is now removed 248 km from the sea and Mohammera 90.38 km. Thus the deposits from the rivers push the coast-line in the Persian Gulf some 29 m seaward every year, or about 3 km per century.

In antiquity Babylonia was the richest granary of the known world. The ancients were aware of this. Thus Herodotus says (I 193): "Of all countries known to us this is by far the best for producing Demeter's seed (i.e. corn), for of trees there is no question at all, neither fig, vine nor olive. But Demeter's seed is so productive that it yields at least two hundred fold, and when it yields its very best up to three hundred, and the blades of the wheat and the barley there easily attain

a width of four fingers. How large the millet and sesame bushes grow there I know well but will not say, as I am sure that people who have not been to Babylonia are already very incredulous of what I have said about the crops." Strabo too (XVI, 1, 14) harps upon the same string: "The country produces more barley than any other country, it is asserted three hundred fold." Even though the simple kind of agriculture now known from the Euphrates valley cannot be compared to that of Babylonia we should not rely too absolutely on the statements of the ancients on this point. Judicious travellers, as for instance G. A. Olivier¹, who know both Egypt and Babylonia from personal knowledge, in contrast with F. R. Chesney and W. K. Loftus who have travelled in Babylonia only, regard Egyptian soil as the most fertile, and the average yield therefore in ancient Babylonia probably hardly exceeded thirty or forty fold.

The rich crops were a result, amongst other things, of the unremitting industry, the drudgery and toil of the Babylonians, irrigation of the fields and assiduous draining by canals being imperative conditions for the growing of corn. But with the entry of the conquering armies of Islam in the 7th century A.D. the canal system fell into decay, and during the ravages of the Mongols in the 13th century it was entirely destroyed. And under Turkish rule, up to 1917, Babylonia was transformed into one of the most desolate tracts of this earth, conditions which have been remedied in our time by newly established oases with palms and corn. Already in antiquity a deterioration seems discernible after the fall of Babylon (538), for in the late summer of 401 B.C. Xenophon (*Anab.* II 4) describes the tract from southern Kunaxa north of Babylon to the Lesser Zab in Assyria as a desolate, uninhabited, uncultivated landscape.

Apart from the region round Falûja and Abû Habbah, the ancient Sippar, where the surface of the soil consists of siliceous stone, Babylonia is extraordinarily fertile, and a canal system would make the landscape one of the richest tracts of the world. Even in the winter, which is cold and bleak, the vegetative power of the soil does not rest; in January, says Ed. Sachau,² many kinds of flowers bloom in the gardens at Kût el-Amâra, besides various species of vegetables, turnips and carrots.

¹ *Voyage dans l'empire ottoman, l'Égypte et la Perse* . . . II (1804).

² *Am Euphrat und Tigris. Reisenotizen aus dem Winter 1897-1898* (1900).

The above-mentioned canal system of the ancients implies a great surplus of water from the Euphrates and Tigris. Herodotus (I 193) is mistaken when he says: "The grain thrives and the corn grows watered by the river, not as in Egypt where the river itself floods the land, but it is watered by hand and by pumps." The latter statement is correct, but it only refers partly to the water from canals and reservoirs used for irrigation in the dry season, partly to water which had to be led to the remotest fields. In the spring time the rivers overflow their banks, and the Mesopotamian landscape needs a double description: one at high water and one at low water level. In the dry season the eye nowadays meets a view of steppes, plains, fields, and villages on the banks of the rivers; at high water level you see water again and again, above which rises a *tell* (Arab. *tall*, plur. *tulûl*), a mound (as a rule one of the mounds with ruins from antiquity) or a group of reed huts on a lower height. And as such a higher-lying island emerges Mosul, surrounded for months by water because the rivers Khosr and Tigris turn the plain into a swamp.¹

§ 2. The inundations in Mesopotamia are more serious than those of the Nile and urgently require to be regulated. Human life in Babylonia is marked by unrest, uncertainty, and toil as a result of the struggle with the waters, and as we shall see, all this set its mark on both the religion and temperament of the inhabitants and on their outlook on life. The Euphrates rises in the Armenian mountains, Murâd-Su and Kara-Su (*Ar-za-ni-a*)² being the names of the parent streams, and flows southwestward through the Taurus towards the Mediterranean. Its total length is 2848 km.; in its upper course, which constitutes $\frac{1}{6}$ of the whole Euphrates, it is a torrent of a deep red colour with many rapids and a width of 180 metres. Its course is checked at Amanus where it turns southward and eastward; in the lowland the velocity is diminished, it increases in width; at the entrance of the Habur it is 360 metres wide, 18 metres deep, at Hillah 180 metres wide, but only 15 metres deep. The depth of the river is not great and to this must be added a curious circumstance: the Euphrates is the only known larger river which becomes narrower gradually as it approaches the

¹ Cf. Felix Jones, *Topography of Nineveh* (JRAS XV, 1855).

² Cf. Sialmaneser III, Monolith Inscr. II 45 (III R 7-8).

sea; the large canals, which we shall presently mention, segregate great masses of water from the main course.

In antiquity navigation was possible only on the lower Euphrates. The boats used were basket-like, plaited from osiers and tightened with bitumen, such as are used even today for crossing the river, or rafts buoyed up by inflated sheepskins or oxskins, from 50 to 300 skins being used in our day according to the weight of the cargo. That navigation even with European craft on the Euphrates may be dangerous is due to the cyclones that sweep over the river. They last at most for 30 minutes and the storm is often accompanied by violent showers of hail, where the hailstones may have a size of 18–22 mm in diameter. During such a cyclone F. R. Chesney, who had been sent out by the English government in 1835–37 to inquire into the navigability of the Euphrates with a view to a seaway from Europe to India, lost one of his ships with 4 officers, 11 sailors, and 5 natives¹.

The Tigris is 900 km shorter than the Euphrates. Shatt el-Arab, the name of the combined rivers from Kurnah to the Persian Gulf, measures 144 km. The Tigris rises only 50 km from the sources of the Euphrates; Shalmaneser III (858–824) in the 15th year of his reign erected a stela at the headwaters of the Tigris and then travelled through a pass to the source of the Euphrates where he cleaned his weapons and offered sacrifices. The Tigris flows southeastward; it is not as wide as the Euphrates, but owing to its much greater depth carries a much larger volume of water than the latter; its course is torrential and wild, and only the lower part of it is navigable till the end of September.

The rivers rise and fall twice a year. The Tigris with its rapid flow rises in March-May, the Euphrates a month later. Hence June-July is the period of high water, whereas October-February shows the lowest water level. The winter rains in November cause a small rise which is smoothed out by the end of December. The difference between the high and low water marks for the Euphrates constitutes between $4\frac{1}{2}$ and $5\frac{3}{4}$ metres. The cause of the great increase in the water volume in the spring time is in both cases the melting of the snow in the Armenian mountains; the effects differ. The Tigris which has very high banks and a great depth can carry along the surplus water masses without flooding its banks until it reaches the last part of its lower

¹ F. R. Chesney, *The expedition for the survey of the rivers Euphrates and Tigris, carried on by order of the British Government in the years 1835, 1836, and 1837 . . .* I–II (1850).

course. It then sends water in huge volume over the lowland but does not deposit any mud or other bottom sediments. In 1831 and the last week of March 1954, however, the inundations of the Tigris threatened the very existence of Baghdad. Of the last-mentioned catastrophe we have detailed news. About 1250000 acres of land in the Central Tigris Basin had been flooded and thousands of people made homeless; Baghdad's destruction was only arrested by making breaches in the bunds containing the rivers Tigris and Diyala, but this flooded a huge area to the east of the city and Baghdad lay as an island between the flooded Tigris on the west and a vast lake of floodwater on the east. — The Euphrates, on the other hand, has its first torrential course through large layers of marl and chalk, which it detaches and carries with it and later deposits. In this way the bed rises, the river becoming very shallow as a result, and the immense volumes of water flood the surrounding lowland at the same time as bottom sediments are deposited. Thus the whole of Babylonia has come into existence from the deposits of the Euphrates through thousands of years.

It is owing to the high-lying bed of the Euphrates and the great spring floods that the river has several times changed its course within historical times. But the shifting from east to west of the bed of the Euphrates has hardly been quite unconnected with the very extensive canalisation which was carried out at the order of the kings. Here, however, we are on uncertain ground and much must probably always remain conjecture. Of facts the following may be mentioned. One of the Sumerian names of the Euphrates is ¹⁰UD-KIB-NUN¹¹, the "Sippar river", which must mean the river that flows through (or past) the town of Sippar. And both Hammurabi (1792–1750) and Nabopolassar (625–605) state in their inscriptions that they had caused the Euphrates, which had receded far from Sippar, to be led back to the town by digging. Further it is mentioned in the Gilgamesh Epic (XI, 11–12) that Shuruppak, i.e. modern Fara, stood on the Euphrates, while another passage would seem to indicate that Uruk is situated at any rate somewhere near the Euphrates. And that the same was the case with Larsa and Ur appears from an inscription and a letter, from Rim-Sin (1822–1762) and Hammurabi, respectively; the latter gives orders for the cleaning of the bed of the Euphrates of water plants from Larsa to Ur. About Nippur we know that it was once situated on the banks of the Euphrates, and finally Babylon, the capital city itself, stood

mainly on the eastern bank of the river, the Euphrates flowing close past the western side of Nebuchadnezzar's palace and Etemenanki's enclosing wall in the time of that ruler (604-562). But only a few years later under Neriglissar (559-556) the river had changed its course so that the new ruler had to put digging in progress to lead the Euphrates back to its old bed from the time of Nebuchadnezzar. Thus a line drawn north-south from Sippar over Babylon, Nippur, Fara, Uruk, Larsa, and Ur very roughly indicates the course of the Euphrates in antiquity, south of Falûja. But of course we cannot follow in detail the possible windings of the river outside the above-mentioned settlements. The reason why I think it is wise to follow Bruno Meissner's reconstructions¹ is that he has made allowance for the canal system and tried to place it in relation to the river bed.

With regard to the Tigris the difficulties are much greater. If we consider the present course of the river, it seems strange that no ancient cities are found south of Tell 'Umair, the ancient Akshak(?), and the latter is seen on the map to be situated on a line with Sippar. Perhaps our present ignorance is due to accidental circumstances; the eastern bank of the Tigris was probably controlled by Elamite tribes that threatened the safety of the settlements on the western bank, but future extensive archaeological researches should give results. Meissner, whom I have followed, supposes that the Tigris in antiquity bent directly southward approximately where the modern settlement of Kût el-Amâra is situated, and followed the bed of the present stream Shatt el-Hai, entering the Persian Gulf parallel with the Euphrates at Ur. If this was the case the very important Sumerian town of Lagash, modern Telloh, would then be situated on the eastern bank of the Tigris. But it should be stated that others consider it possible that the Tigris did not leave its present bed until the 7th or 8th century A.D., returning to its original bed in the 15th century A.D. since Shatt el-Hai was at that time blocked by the deposits of the river.

§ 3. The large-scale canal construction in ancient Babylonia had two objects, partly to divert the huge volumes of water so that the cities on the banks of the rivers should not annually be destroyed by floods, partly to lead the water volumes to the landscape between the rivers and thus increase the fertility and productive capacity of the

¹ *Babylonien und Assyrien* I (1920), Karte des alten und neuen Babyloniens.

soil; a secondary purpose was to facilitate communication by the construction of canals between the city communities which had grown up along the rivers or in the tracts between them. "Since the Euphrates, when the snow in Armenia has melted in the spring, becomes swollen at the beginning of the summer, it would necessarily flood the fields and change them into swamps if the surplus water were not drained off through ditches and canals, as is the case with the Nile in Egypt. Thus the canals have come into existence. But it is necessary to attend to these with great care, for the soil is deep and soft, and easily breaks away, so that it is washed away by the current, and the plains are denuded, but the canals themselves are filled up, and silt easily blocks their mouths. And then the surplus water forms lakes, morasses, and reed swamps," says Strabo (XVI, 1, 9). And he continues: "It is the duty of every good ruler, since such floods cannot be entirely prevented, to give the greatest possible aid. And this consists in preventing the river from flooding its banks excessively by diking, and by cleaning the canals, especially at their mouths, and hindering these from silting up. The cleaning is easy, but the building of dikes requires many hands . . .". However, it is not enough to dig canals, keep them carefully in repair, and amongst other things see that the water can flow unchecked through them. If at a certain time (April-June) it is important to prevent the blocking of the mouths of the canals, it must be remembered that from July comes the low-water period of the Euphrates, "and then it is necessary to block the canals quickly lest all the water should run out of them, for when they dry up in the summer, the river too will dry up and cannot then, when it is most urgent, give off the requisite volume of water to the parched and scorched landscape. But it makes no difference whether the crop ripening in the fields is drowned in a flood or perishes from drought. Nor can the very useful navigation, which is imperilled by these two nuisances, take place, if the outlets of the canals cannot be swiftly opened and closed so that the water level of the canals is always kept at a medium level and the water in them neither overflows nor is lacking." Strabo concludes (XVI, 1, 10).

Hence the agriculturist of the Babylonian landscape fights a double fight which appears in his endeavours partly to get rid of the great volumes of water, and partly to retain them in the dry season. We have heard often enough that Egypt is the gift of the Nile, but in Mesopo-

tamia the huge water masses of the Euphrates were a curse which could only be kept under control by the incessant toil and toil of the Babylonians, the fruits of which in the shape of an excessive production of corn in later times in the main benefited the large landowners and the central administration. We must imagine the landscape from Sippar in the north to Larsa, Lagash, and Ur in the south intersected by a very carefully designed network of larger or smaller canals, in the construction of which both the special local conditions and larger geographico-political units had been taken into account. By means of various, very simple, hydraulic devices, probably as used in our day here and in Egypt in the form of a kind of endless chain mechanism (paternosterworks) worked by oxen, or raising it by man power, the water was led to the more remote fields or to higher levels than the river bed or canal. The banks of the canals were often protected by walls of stone or burnt clay. These bulwarks which were provided with sluice gates had to be constantly repaired.

In addition to this canal system serving exclusively agricultural purposes, another was found in Babylonia, probably chiefly constructed to facilitate communication between the cities, which could only take place by way of the river. The government also had to provide river ways for the export of corn, which was a vital necessity to Babylonia, for only in this way could the import of indispensable raw materials be secured for the country. But it should be remembered too that the above-mentioned change in the course of the Euphrates from east to west was a catastrophe for the cities once standing on its banks, so that special canals had to be dug to remedy the instability of the river. To this must be added the fact that, after close contact had been established between Assyria in the north and Babylonia in the south, the rulers in the north wished to facilitate communication between the kingdoms by connecting the rivers by transverse canals. And finally it is probable that certain large canals must be interpreted as central waterways from which the network of minor canals must have radiated according to a familiar well-considered system, partly to increase the yield of the soil, partly to regulate the erratic movements of the Euphrates.

Strabo (XVI, 1, 11) quotes from Aristobulus (4th century B.C.) that Alexander the Great sailed on the Babylonian canals; Arrianus (VII, 21, 1) mentions one of these called Pallakopas. It was the largest of

all the canals and may indeed have been improved by digging but more correctly it should be regarded as an arm of the Euphrates. Perhaps the canal had purposely been diverted from the Euphrates south of the city of Pallukat, modern Falûja, and was roughly parallel to the main arm of the Euphrates, ending at Eridu and the Persian Gulf. The Babylonians called this mighty arm of the river Pallukatu; the modern Hindîya canal flows approximately where Pallukatu had its upper course in antiquity, while the present lower course of the Euphrates is probably largely identical with the Pallukatu canal. The course of the main arm of the Euphrates, on the other hand, was more easterly in ancient times; Shatt en-Nîl's and Shatt el-Kâr's beds give us an idea of how it was.

North of Sippar the Enlil canal (*patti Enlil*) connected the Pallukatu-Euphrates with the Tigris, while a little farther to the south the "Royal canal" (*nâr šarri*) connected Sippar and Akshak on the left bank of the Tigris. As a third means of communication between the two rivers may be mentioned the "Hammurabi canal" which we are unable to localise. Farther southward flowed the "Kutha canal", approximately parallel to the Euphrates and the Tigris; perhaps their construction was an attempt to prevent excessive pressure from the great volumes of water flowing past the capital Babylon. The latter was connected with the neighbouring town Borsippa by a canal named after that town. Of the Libil-hegalla canal in Babylon we know that it formed a lateral arm of the Euphrates, purposely excavated to reduce the rapid flow of the river past Nebuchadnezzar's palace. That it was identical with Shatt en-Nîl, as A. J. Delattre¹ thinks, I can hardly believe, for in the place where the bed of the latter is now seen, the main stream of the Euphrates, as stated above, had its course in antiquity. It was into the Arahtu canal, which E. Unger² merely regards as a name for the Euphrates in its course through Babylon, that Sennacherib threw the remains of the bricks from the ruined Babylon after the conquest in 689 B.C. In the Bavian inscription Sennacherib says: "I despoiled the city and its houses from the foundation to the summits, I ravaged them and allowed them to be consumed by fire. I cleared away the outer and the inner wall, the temples and all existing ziggurats of brick

¹ *Revue des questions scientifiques* 1883.

² *Babylon* ... (1931).

and rubble and threw them into the Arahtu canal"¹. Perhaps Babylon, the powerful capital of the southern kingdom, had ensured connection with Nippur, at all times the holiest of all cities throughout the history of southern Mesopotamia, through the "Kabaru canal". The larger canal constructions in southern Babylonia are only known to us from the evidence of the texts, but Rim-Sin's building operations at Lagash and Larsa were perhaps intended to connect the Euphrates with the Tigris.

§ 4. From northern Assyria too we have textual evidence of the canal construction of the kings. Thus in the oldest capital Assur, Ashurnasirpal (883-59) repaired a canal which had not been navigable for 30 years; but on a really large scale were the enterprises of Sennacherib. In the Bavian inscription the great king says: "At that time I enlarged the area of Nineveh . . . its fields which were neglected and destroyed for lack of water, while its owners (literally: people), ignorant of artificial irrigation lifted their eyes to Heaven for showers - [these fields] I watered. And from the villages of Masiti, Banbakabnia . . . Tillu, Alumşusi (a total of 18 such are mentioned) [and likewise as regards] the waters which were at the city of Hadabiti, I dug 18 canals and turned their courses into the river Khosr (*Hu-su-ur*). From the boundary of the city of Kisiri to the interior of Nineveh I dug a canal, I led [the above-mentioned] waters into this [canal]. I called it the Sennacherib canal."² In an inscription from the year 694 B.C. he also mentions his magnificent canal operations and describes with pride the fertility which was the result of the irrigations. "So as to make these waters flow [through] the steep mountains I cut through difficult passages with hoes and conducted their outflow to the plain around Nineveh. I made the canal courses durable, [their banks] being raised as high as mountains, and so these waters were secured within them . . . Thus I had all the orchards watered in the hot [season], and in the winter I obtained water for thousands of fields above and below the city . . . At the command of the God the vine, every kind of fruit, *sirdu* trees (a kind of bitter almond?) and herbs grew in the gardens most luxuriantly and better than they used to grow [under ordi-

¹ III R 14, 50-52.

² III R 14, 5-12.

nary circumstances]. Cypress and mulberry trees, nay all kinds of trees grew large and put out many shoots . . . the birds of heaven, the *igirû* birds (a kind of heron?) whose home is far from here built their nests, boars and stags multiplied in abundance . . .¹.

In 1932 Thorkild Jacobsen identified the remains of the aqueduct at Jerwân, about 4 miles south of Bavian, as one of Sennacherib's constructions in connection with the irrigations which the above-quoted inscriptions describe. Through an extensive system of canals Sennacherib joined the Atrush-Gomel river with its large body of water and the Khosr, one of the small tributaries of the Tigris which flowed through Nineveh; in the place where modern Jerwan is situated, he reinforced the banks of the canal by high ramparts of masoned stones. According to contemporary inscriptions there were also large gate houses, but further the stone pavement of the river bed in this place has been found, so that the term "aqueduct" is entirely in keeping with the character of the finds. Sennacherib's Bavian-Khosr canal has long been dried up, but the stupendous scale of the undertaking will be realised from a consideration of the distance from Nineveh to Bavian, the mountainous character of the landscape, and the extraordinary results for the fertility of the 18 villages mentioned by Sennacherib. Of the large-scale canal construction of his successor Esarhaddon we obtain some idea by considering the Negub tunnel.

The background of Sennacherib's and Esarhaddon's interest in canal building in Assyria is the fact that throughout the year this northern landscape in contradistinction to Babylonia suffers from a scarcity of water. Most of the time the landscape presents a spectacle of desert regions, and only in the spring, after the winter rains, does a carpet of green grass appear, which is parched by the broiling heat of the summer suns. In January and February when the orchards in the south are flowering, no food-stuff grows in Assyria, and in unfavourable years famine knocks at the door. But the nearer we approach to the mountains in the north the oftener do we find spots of a rich red or black loam deposited by numerous streams over the white and grey saline earth. The mimosa, broom, and fleshy saltwort bushes, among which the wild ass, the ostrich, and the bustard roam, are replaced by orchards and tall trees whose growth is rendered possible by the artificial irrigation from the eastern larger or smaller

¹ BM 103000, VIII 36-59 (CT XXVI, 1009).

arms of the Tigris. The spring rains change the plain into meadows where the cattle graze, and tulips, anemones, and crocuses of all colours flourish. The barley ripens and yields many fold, and the large plain between the eastern bank of the Tigris and the two Zâb rivers was the rich granary of Assyria. The landscape east of the river is hilly with long ridges and full of rocky areas. Plains and valleys diversify the prospect. The plain at Mosul presents a varied view to the modern traveller: cultivated tobacco and rice succeed to cotton fields, the water power of countless mills is utilised everywhere, oleanders alternate with walnut trees, oak, and figs. But in the greater part of Assyria the ground is covered by a layer of dry crumbling stones, and only after a period of heavy rains does sufficient vegetation come up for sheep and camels to halt there, whereas corn can only grow after systematic irrigation.

In present-day Iraq vast irrigation projects have been carried out or planned for the conservation and proper distribution of flood-waters by means of barriers and reservoirs. In 1913 the Hindiya Barrage on the lower Euphrates was completed; it has a length of 240 metres and through the Hillah canal and other channels brings 180 000 hectares of land under adequate irrigation in winter. On the Tigris the major accomplishment is the Kut Barrage, completed and opened by King Ghazi in 1939, which ensures irrigation of some 900 000 acres of land through a canal called the Gharraf, taking the line of what was once the main bed of the Tigris: this barrage has a length of 1625 feet. After the World War II the Development Board of Iraq has embarked upon a scheme of flood control of the waters of the Tigris and Euphrates rivers in the upper part of Iraq.¹ These projects (water behind dams or water storage in natural depressions) whose economic effects will be of benefit to Iraq are the following: Bekhme Dam (Greater Zâb, near Rowanduz), Dukan Dam (Lesser Zâb near Zarzi Cave), Derbende-Khan Dam (Diyala, near Halabja), Sublij Dam (Tigris, near Eski-Mosul), Rawa Dam (Euphrates, near Anah), and Wâdi Tharthar Basin (north of Ramadi): Samarra Barrage scheme.

§ 5. The climate of Assyria is a pronounced continental climate. The heat is oppressive in July-August, the maximum temperature does not differ from that of Babylonia. In December and January the north

¹ Cf. R. S. Solecki, *Sumer* IX, (1953), pp. 101 ff.

wind often brings snow and frost, the temperature, -18°C. , in 1911 being a mere exception; modern excavators speak of 4 warm, 3 cold, but then, on the other hand, 5 good months. In the winter and early spring there is hardly any rainfall, but then comes a short period with sudden heavy showers accompanied by lightening and hail.

The Babylonian landscape has already been alluded to above when we described the canal system. The rich alluvial land watered by the far-reaching network of canals was the soil of the richest granary of the Middle East, and date palms, mimosa trees, rushes, willows and poplars grew as far as the irrigations extended. But in places where the water did not penetrate the sun parched the clayey soil of the plains so that it cracked, and creeping desert plants such as broom and mallows were the only vegetation. At the lowest levels the stagnant water formed reed swamps after July. In our day we see the landscape at the mouth of the river changed into a lagoon overgrown with reeds and charged with the germs of fever. The heat is terrific in the summer in Babylonia; at Hillah south of Babylon, which H. R. Hall¹ characterises as the most Egyptian of all Iraq's settlements, a temperature of 49.3°C. in the shade was measured in 1911; the normal temperature in the warm season lies around 42°C. (in the sun $50-60^{\circ}\text{C.}$). In April, on the other hand, the early morning temperature is only $12-13^{\circ}\text{C.}$, while the day and night temperature in the same month is 37 and 36.6°C. and that of the river water is 24°C. Hence the great excavation expeditions only count on the time from November 1. to the middle of March, the mild and cool season, since the heat for 6-7 months of the year presents serious obstacles to all work in Babylonia. Only J. H. Haynes at Nippur, R. Koldewey in Babylon, and W. Andrae at Assur carried out excavations all the year round, but they have formed no school. The violent dust storms brought on by the southwest wind in the latter part of March and the beginning of April, often accompanied by swarms of locusts, are a terrible scourge both to the inhabitants and to travellers. The winter must have been mild; the Persian kings moved their residence to Babylon in the winter in order to escape from the cold of the Iranian plain, for it must be remembered that in antiquity a large part of southern Mesopotamia was one network of water-filled canals, and this must have prevented great changes of temperature. And the violent storms which in our time

¹ *A Season's Work at Ur ...* (1930).

carry yellow sand and dust in over the desiccated alluvial land, only reached the extreme outpost of the canal system in ancient times. In the dry desert of our day the Babylonian winters are raw and cold, but the 1911 reading of $6\frac{1}{2}^{\circ}$ C. below zero forms an exception.

§ 6. In the mountainous Assyria only some 12000 sq.km are habitable country, whereas the Babylonian area, thanks to the extensive canal system, was considerably larger, though it is not possible to give any definite figure. At various times civil wars and foreign invasions caused disturbance and decay of the canal system, but wherever the water had been led and the soil was carefully cultivated we have a country yielding large crops. Other products besides corn were harvested by the inhabitants, some have been mentioned in passing above. The cereals were chiefly of two sorts: wheat and barley, both of whose agrarian ancestors botanists have found in Palestine; to these must be added millet and sesame. Of other food plants may be mentioned marrow, water melon, onions, beans, peas, cucumbers, and lentils, and fruit trees such as apricots, figs, lemons, and almonds, but these must all have served as foods for the populations of the two landscapes like the grapevine, which was only grown in Assyria, and the beer which was brewed both in the north and the south.

Besides the corn exported to Syria, Egypt, and via Asia Minor to Europe, dates were an important export commodity. More than 20 different kinds of date palms have been found, but they are never met with further north than Anah. According to the Greeks, the natives obtained palm wine as well as fruits from the tree; also a kind of bread, vinegar, honey, thread, and rope as well as wood for heating. In the earliest period, it can now be seen, the trunks of palm trees were also used as a buttressing building material. In addition to corn and dates, textiles woven of the wool of the flocks were exported, as well as bitumen, the *ἄσφαλτος* of the ancients, large quantities of which are especially met with in its natural state in the northern regions at Kirkuk and among other places chiefly between Samarra and Assur, west of the Tigris.

Roses bloom in the delta even to this day, and from south to north one sees cypress, tamarisk, acacia, plane trees, walnut, willow, poplar, lime, oak and beech, while a wealth of flowering tulips, anemones, and crocus clothing the Assyrian plains delights the eye in spring time.

Numerous sculptures show us that there was a rich fauna, and in our day too the traveller or archaeologist finds a variety of animals even in the lagunes. Thus H. V. Hilprecht, who carried on excavations at intervals in Nippur from 1889-1900, tells us that large flocks of birds with brilliant plumages inhabit the swamps which present a magnificent sight in the spring when white crowfoot covers them like a graceful carpet. Turtles and snakes glide rapidly along the roads formed by the old canals in the lagunes, and countless small green frogs squat on the reeds which are softly stirred by the morning wind. Hideous buffaloes wallow and splash about among the reeds and sharp edged grasses. "Wild animals, boars, and hyenas, jackals and wolves and an occasional lion infest the jungles".¹ Hilprecht might also have mentioned storks, cranes, herons, gulls, ducks, geese, pelicans, and swans, besides mosquitos; it does not appear clearly from his description whether he saw lions himself, but F. R. Chesney says that in 1836 he saw lions at the banks of the Euphrates as did W. K. Loftus in 1854 in the vicinity of Senkereh (Larsa). In antiquity there were two species of lions, none of them like the African lion in size, more like a St. Bernhard, maneless or with a black mane. Ashurbanipal of Assyria (668-626) has immortalised in his reliefs his fearless fights, often barefisted, with lions, but that the lion was also known in southern Babylonia in the earliest historical times appears from several pictures found in the grave of Queen Shub-ad, who belonged to the Ur I Dynasty (2459-2309 B.C.).

The fish stock of the rivers, such as carp, eels, and murry, as well as the domesticated ox (*bos primigenius*), goat, and sheep served as food for the population; the ox and the ass were also used as draught animals, and the sheep's wool furnished material for textiles. The horse did not appear till after the year 2000 B.C.; it came from the regions of Asia Minor, e.g. Cappadocia, Cilicia, and Tabal, and from Iran; in their ideographic writing the Babylonians called it "the ass from the mountains", while the camel which was introduced later was called "the ass from the sea". As a third animal with which the Babylonians only became acquainted later on may be mentioned the ostrich. The wild elephant, which in the earliest times roamed the land round the middle course of the Euphrates, disappeared from there before the year 1000 B.C. But even the Assyrian king Tiglath-

¹ H. V. Hilprecht, *The Excavations in Assyria and Babylonia* (1901), p. 6.

pileser I (1116-1078) tells us in his octagonal prism inscription: "I killed ten strong male elephants in Harran and the neighbourhood of the Habur river. I caught four elephants alive. I carried their hides and teeth with the living elephants to my city of Assur. At the command of Nin-urta (or: In-urta, En-urta), who loves me, I killed 120 lions on foot with great courage and manly attack, and I brought down 800 lions with my javelin (?) from my chariot."¹ Antelope, gazelle, ibex, and in the northern regions also doves, hares, wolves and bears were the objects of the ordinary hunter accompanied by his tame dog. Of the attitude of the ancients to the eagles and vultures, beavers, hedgehogs, snakes and scorpions of which we hear in modern travel books, we know nothing. The same applies to the partridges, thrushes, ortulans, and blackbirds in the more wooded mountainous landscape of Assyria. On the other hand, we obtain an excellent insight into the life and the hunting of the larger mammals from the numerous Mesopotamian cylinder seals.

§ 7. The above-mentioned exportation of corn, dates, textiles, and bitumen was of vital importance to Mesopotamia. The south country, especially, which lay open to attack from enemies in the west or east, was unable to supply itself as Egypt did. The treeless landscape had only small limestone heights situated in the neighbourhood of Ur; here, we may presume, the Sumerians fetched their first building stones. But these were small, and neither flint nor obsidian was present in Babylonia as it was in Egypt, so that even the most necessary implements, later of bronze, had to be imported, as well as raw materials such as timber and stone. The water way of the Euphrates must have been an invaluable aid for the import as well as the export trade,² but in the period before a more centralised government was able to procure, by systematic canal construction, a surplus of corn to exchange e.g. for stones, clay was used as the sole building material. This was present everywhere, was cut out in smaller or larger squares for bricks which were either sun-dried or baked in ovens. The former were used for interior walls, while the more durable baked bricks were employed where greater carrying power was required (outer walls, vaults). In spite of the later great importation of stones from

¹ Cyl. Inscr. VI 70-81 (AKA pp. 85 f.).

² Cf. Chapter XII §§ 4-5.

Ethiopia, eastern Arabia, Lebanon, and Amanus in the form of limestone or diorite, this building material was mainly used for royal residences and temples. For ordinary uses clay was still employed, the bricks made from this being joined together sometimes with bitumen and sometimes with lime for mortar; in the earliest times they were simply piled on top of each other with great care and often in patterns. Finally the Babylonian importation comprised timber from Asia Minor and Syria, metals and minerals from Asia Minor, Elam, and Assyria, as well as precious stones such as marble, rock-crystal, lapis lazuli, agate, and hematite (from Cappadocia). As a trading commodity may finally be mentioned slaves, but here importation and exportation are not the proper terms but rather exchange and spoils of war.

Assyria, on the other hand, possessed in the first place stone (limestone, sandstone, alabaster) but the building operations of the great kings and their exportation of stone to Babylonia in connection herewith were so extensive that burnt brick served as building material for ordinary houses; costly kinds of stone such as marble and basalt were imported, for instance from Kurdistan. Further the rich bitumen deposits at Kirkuk came within the domain of the Assyrian rulers, and within their great empire iron, copper, lead (Armenia), and silver were mined. The abundance of timber in the country was also of great importance, for instance in the mining of the minerals and the working of them by heating. Despite the relative abundance of raw materials in Assyria the need especially for bronze implements, and not least for weapons, raised export problems for the government which could only be effectively solved after close relations had been established with the rich granary of Babylonia. Lead, antimony, and later tin, were the alloys used to make bronze from pure copper. But while lead, as in our day, often occurred in connection with silver, antimony and tin had to be procured from Drangiana in eastern Iran, and from Syria and Asia Minor.

CHAPTER II

EARLY EXPLORATIONS

§ 1. In August 612 B.C. Nineveh was captured by the allied Median and Babylonian armies after sanguinary fighting. The destruction of the capital of the hateful Assyrian kings seems to have been complete, and none of the succeeding Neo-Babylonian or Persian rulers of Mesopotamia stirred a finger to rebuild the city or even parts of it. The Old Testament prophet Nahum's impassioned words, of uncertain date, came true in 612; only remnants of the city walls were left. Herodotus, who travelled in Mesopotamia and Persia before 445 B.C. only knows Nineveh, ἡ Νίνος, by name, and as a city that has perished¹. Xenophon, who after the defeat on the 3/4, 401 B.C. at Kunaxa near the present Falûja, marched northward with his troops along the Tigris, speaks of a town, Mespila, as a desolate ruin: 'Εντεῦθεν δ' ἐπορεύθησαν σταθμὸν ἓνα παρασάγγας ἔξ πρὸς τεῖχος ἔρημον μέγα κείμενον ὄνομα δὲ ἦν τῇ πόλει Μέσπιλα (*Anab.* III, 4,10), and connects its destruction with conflicts between the Median queen Medeia and the Persians. That the site, however, harbours the ruins of ancient Nineveh appears from Xenophon's description of the city walls: foundations 50 feet broad and 50 feet high, on which had been erected a wall 50 feet broad and 100 feet high, whose total circumference was 6 parasangs (ca. 33 km). It is characteristic that Xenophon does not mention the name of Nineveh in this connection, the total destruction of the town had caused even this to be forgotten already after two hundred years, and it is with full justice that Lucianus XII 23, in the 2nd century A.D. can exclaim, "Why, as to Nineveh, it is gone, friend, long ago, and has left no trace behind it; there is no saying whereabouts it may have been, Ἡ Νίνος μὲν, ὃ πορθμεῦ, ἀπόλωλεν ἤδη καὶ οὐδὲ ἶχνος ἔτι λοιπὸν αὐτῆς, οὐδ' ἂν εἴποις ὅπου ποτ' ἦν. Whether Xenophon's Mespila has any connection with the city name of Mosul (Mauşil) can hardly be determined. Mosul is first

¹ Νίνου ἀναστάτου I 178, cp. I 185, II 150.

mentioned in 636 A.D. and in the 9th century it became one of the episcopal seats of the Syrian Church, and flourished as an Arabian town under the Caliphate, only to receive a serious setback during the ravages of the Mongols (Hulagu 1259, Tamerlane 1400).

§ 2. The fate of Babylon, the capital of the southern kingdom, was of quite another kind. When despite its enormous fortified walls, it was captured without resistance by the Persian king Cyrus in November 538 B.C., *Araḥšamna ūmu 3^{kam m} Ku-raš ana Bābili^{kl} ērub*,¹ he did not deal as Sennacherib did (689 B.C.) with the conquered city but *šu-lum ana āli ša-kin^m Ku-raš šu-lum ana Bābili gab-bi-šu ḫi-bi*.² And the following year on the fourth of Nisannu Cambyses went to the temple as the representative of his father in order to celebrate the great *isinnu akītu* like a true Babylonian³. Perhaps Cambyses was set up as king of Babylon by Cyrus in the year after the conquest, 537 B.C.; compare the dating of a Neo-Babylonian contract, *arḫu Simānu ūmu 10^{kam} šattu 1^{ham} Ku-raš šar mātāti i-nu-šu Ka-am-bu-zi-ia šar Bābili^{kl}*.⁴ Our assignment above of the year 537 as the first year of Cyrus' reign, is based on the conjecture that the Achaemenians continued in Babylonia the ancient Assyro-Babylonian practice that the actual accession of the king to power did not take place until the New Year of the following year, as will be seen by the chronological calculations of the annals. At the New Year's feast, *isinnu akītu*, the king identified himself with Ashur or Marduk, creating the fertility and the victories of the kingdom for the year to come⁵.

The royal titles of the Achaemenians differ from those of the Neo-Babylonian rulers. Nabopolassar (625–605) adopted the style of the ancient kings of the Ur III Dynasty (2123–2016), *šar Bābili^{kl} šar māti Šu-me-ra-am u Ak-ka-di-im*, whereas the most powerful Neo-Babylonian, Nebuchadnezzar II (604–562), always merely calls himself *šar Bābili^{kl}*. The last king, Nabonidus (555–538), on the other hand, resumed the title of the Assyrian kings who were overthrown already in 612 B.C., *šar kiš-ša-ti šar Bābili^{kl} šar ḫib-ra-a-ti ir-bit-ti*. In contrast with this the ancient Persian royal title was *šarru ša šar šarrāni* or *šar šarrāni šar*

¹ Nabonidus' Annals (BM 35382) III 18.

² *Ibid.* III 19–20; Jeremiah I.I 30–34. 41–45 thus represents a wishful dream.

³ *Ibid.* III 24–25, cf. S. Palls, *The Babylonian Akītu Festival* (1926), p. 2.

⁴ Felix E. Pelsner, *Texte juristischen und geschäftlichen Inhalts* (1896), p. 260 (KB IV).

⁵ Cf. S. Palls, *The Babylonian Akītu Festival* (1926).

mâtâti. After the conquest of Babylon the Achaemenians, up to a certain period which will later be made the subject of investigation, styled themselves *šar Bâbili*^{kl} *šar mâtâti* or *šar Bâbili*^{kl} *û mâtâti*, a title which the first Seleucids took over, though from the time of Seleukos II (247–26) they substituted *šarru* alone for it; the Arsacids resumed the old Achaemenian title *šar šarrâni*.

The peaceful relations of the Babylonians with Cyrus and Cambyases were interrupted when, with Darius I (522–486) another branch of the Achaemenians ascended the throne of the Persian kings. Immediately after his succession revolts broke out twice in Babylon, under the leadership respectively of Nidintum-Bêl and Arahu, who both claimed to be sons of Nabonidus, and called themselves Nabû-kudurri-ušur. Twice Babylon was recaptured by Darius I, on the 18th December 522 and the 27th November 521; and the leaders of the rebellion were executed, as recounted by the great king in §§ 16–20, 49–50, 52 of the Bihistûn inscription.¹ That the city of Babylon did not suffer any great damage on these occasions² appears from the fact that Darius I, on account of the cold winter on the Iranian plateau, moved his winter residence to Babylon. Thus he relates how he marched out from Babylon against the Medes: *Da-ri-ja-muš šarru ki-a-am i-gab-bi ar-ki ana-ku ul-tu Bâbili*^{kl} *u-ša-am-ma at-la-lak a-na* ^{mâtu} *Ma-da-a-a*.³

Under Xerxes (486–65), the son of Darius I, the famous repetition of his father's unsuccessful expedition to Greece took place. The Babylonians contributed their war contingent in the form of detachments of troops for Xerxes' army. During Xerxes' reign a rebellion broke out in Babylon. Our information about this is as follows: (1) In Neo-Babylonian contracts three⁴ kings of Babylon are mentioned without dates; their titles are *šar Bâbili*^{kl} *û mâtâti*, which can only be referred to the time of the Achaemenians. Their names are Bêl-šimanni (3 contracts,) Šamaš-erba (7 contracts),⁵ and a third name, the reading of

¹ F. H. Weissbach, *Die Kellinschriften der Achämeniden* (1911; VAB III), cp. also Herodotus III 150–159.

² Herodotus III 159 mentions that Darius, after his victory, demolished Babylon's fortification walls, cp. below p. 39.

³ Bihistûn § 31.

⁴ I disregard Ak-sl-ma-ak-šu, which I look upon as an inexact rendering of Xerxes, despite A. Ungnad, *OLZ*, Beiheft 2 (1908), p. 25, and F. H. Weissbach, *ZDMG* LXII (1908), p. 644.

⁵ Šamaš-erba was established in 1892 by Jules Oppert, *RA* II (1892) on the basis of the Arsacid texts (ZA III 1888) published by J. N. Strassmaier. Concerning Bêl-šimanni,

which is uncertain. We have only one contract in the possession of Lord Amherst of Hackney, derived from Birs Nimrûd,¹ dated *Bar-zip ar^{hu} Addari ūmu ešra-išlên [šathu] rêš lugal-nam uš(?) -hu-ši-ku(?) -uš(?) -li šar Bâbili^{kl} šar mâtâtî*. (2) From the reign of Xerxes we have 35 Neo-Babylonian contracts dated in the 1-5, 8(?), 10, 12 and 16th year of his reign.² To and including the 4th year his titles are *šar Par-su ū Ma-da-a-a šar Bâbili^{kl} ū mâtâtî*, or merely *šar Bâbili^{kl} ū mâtâtî*. In the 5th year the name of Babylon is omitted; perhaps it is found in a Berlin contract (VAT 4549, published in VS V (1908), No. 113), whose year-dating is defective and can only be supplied till the 8th year.³ But we must keep in mind that we have no contract datings from the 6th, 7th, and 9th years of Xerxes' reign. (3) Classical authors mention that Xerxes captured the rebellious city after a few months' siege, after which it was sacked, its chief temple Ešagila as well as the other temples being burnt down to the ground,⁴ its statue of Marduk carried away as spoil of war⁵ and numerous inhabitants as well.

From this material the following facts would seem to emerge. After the destruction of Ešagila and the removal of the Marduk statue, *isinnu akltu* could no longer be held at Babylon, and it follows that no one could henceforth call himself *šar Bâbili^{kl}*. For the king of Babylon was now excluded from identifying himself with Marduk by "the hand ceremony" (*kâtâ^{ll} ū Bêl iṣabbat*),⁶ and in this way, after the dramatic fight against the water demons, creating the fertility of the city and kingdom, which was the essential religious function of the Babylonian king.⁷ This explains why Xerxes from a certain time no longer called himself King of Babylon in the above-mentioned contract datings. The rebellious kings imply either several revolts or rival insurgents against Xerxes.

which name only occurs in Neo-Babylonian contracts in Berlin not published till after 1907, see A. Ungnad, *OLZ* X (1907), p. 464.

¹ Th. G. Pinches, *Notes upon a small collection of tablets from the Birs Nimroud belonging to Lord Amherst of Hackney* (*Verhandlungen des XIII internationalen Orientalisten-Kongresses, Hamburg, September 1902, 1904*).

² F. H. Weissbach, *Zur Neubabylonischen und achämenidischen Chronologie* (*ZDMG* LXII 1908).

³ E. Unger, *Babylon* (1931), p. 39.

⁴ Strabo XVI, 1, 5; Arrianus III 16, VII 17.

⁵ Herodotus I 183; Arrianus VII 17.

⁶ S. Palls, *The Babylonian Akltu Festival* (1926), pp. 174 ff.

⁷ *Ibid.* pp. 249-306.

The crucial years and the definite date of the conquest of the city and the destruction of Esagila are difficult to determine. In his 4th year Xerxes calls himself *šar Bābili*¹, in his fifth year merely *šar mātāti*, in his 8th year the name of Babylon probably enters into the title again¹ from the 10th year all talk of Xerxes as king of Babylon drops out. From our preceding considerations² it follows that Xerxes' 1st year as king of Babylon was 485, his 10th year 476. The three rebel kings would seem to imply that Xerxes was forced into several settlements with the city of Babylon, but the siege of the city and its destruction as a sacred city is explicitly referred by Arrianus VII 17 to the period after Xerxes' return from his unsuccessful expedition to Greece. This takes us down to some period after 480; the battle of Salamis was fought on the 20th September 480, after which Xerxes went to Sardis and transferred the command of the troops in Greece to Mardonius. All that we can say with certainty is thus that the annihilation of Babylon as a sacred city took place at some time between 480 and 476. Going by the persons mentioned in the contracts (also without year dating), persons known from other documents (Nidinta-Bêl, the Egibi family³), we may approximately assign the three rebel kings to the first years of Xerxes' reign⁴, but we do not know which of them was Babylon's last king when Xerxes' punishment fell upon the city.

That Babylon, in spite of the harsh treatment, was far from being reduced to a heap of ruins would appear from Herodotus' detailed description of the town in I 178-187. O. E. Ravn's thorough investigation of his information⁵ tends to establish the fact that the Greek author had been to Babylon. Still certain details in Herodotus, of which only his account of Esagila will be mentioned here, leave us in some doubt.⁶ In this book the term Esagila is employed as a collective name for the chief temple of the city, that immense assemblage of buildings consisting of Esagila and the temple tower of Etemenanki. The latter is not mentioned after the time of Nabonidus; we do not know whether

¹ F. H. Weissbach, *ZDMG* LXII (1908), p. 643.

² See p. 20.

³ Cf. A. Ungnad, *Das Haus Egibi* (AOF 14 (1941-44), pp. 57-64).

⁴ See Jules Oppert, *Un patriote babylonien* (RA II, 1892).

⁵ *Herodotus' Description of Babylon* (1942).

⁶ Compare also W. Baumgartner, *Herodots babylonische und assyrische Nachrichten* (*Archiv Orientalni* XVIII 1-2 (1950), pp. 69-106).

Xerxes also destroyed Etemenanki somewhere between 480 and 476. But the so-called Smith Tablet¹, which was composed at Uruk in the time of the Seleucids, on December 12th 229 B.C., cannot be taken as a proof that the high temple of Etemenanki existed in the year 229; the fact that the Smith Tablet employs archaic language in spite of its late date² would seem to indicate that it is a late copy of a much older text. The circumstance that Herodotus, as will appear from II 30.99 and III 12, did not visit Egypt until after the suppression of the revolt against the Persian rule, and tells us in II 150 that he has been to Babylon before his journey to Egypt, shows us that some time prior to 445 B.C. he visited the ancient metropolis, or between 30–40 years after Xerxes burnt down Esagila. It is a matter of course that blocks of buildings covering such large areas cannot disappear from the profile of a town, but Esagila must have been in ruins in the time of Herodotus. In Strabo XVI, 1,4 and Arrianus III 16, VII 17 we hear of Alexander the Great's command to rebuild the temple in 331, and we know that in the year 275 B.C. Antiochos I began the re-erection of Esagila which had been indefinitely postponed at the sudden death of Alexander.

About the imposing palace buildings of the Neo-Babylonian kings, especially Nebuchadnezzar, we find information in our primary sources. Cyrus took the town in 538 B.C. without striking a blow, and it is probable that the first Achaemenian rulers had their residence in the same place as Nebuchadnezzar. Xerxes' war against rebels and opposing kings may also have involved partial destruction of the palaces of the town. But the only thing we know with certainty is that the Persian king Artaxerxes III Ochus (361–38), some time before the year 345, built himself a palace³, a Persian *apadāna*, at Babylon. In 331 Alexander the Great made an end of the Persian empire, entered Babylon,⁴ resolved to make the city the residential town for his possessions in the Middle East, and at the same time commanded that Esagila should be rebuilt. Upon Alexander's return from his eastern campaigns in 323,

¹ V. Schell, *Mém. d. l'Ac. des Inscr. et Belles Lettres* XXXIX (1913), cp. R. Koldewey, *MDOG* LIX (1918).

² S. Paills, *The Babylonian Akitu Festival* (1926), p. 108.

³ Diodorus Siculus II 7 describes its polychromic decoration, cp. also R. Koldewey, *Das wieder erstehende Babylon* (1913), pp. 126 ff.

⁴ Arrianus III 16 and Quintus Curtius Rufus V 3–6 who do not mention Esagila; Josephus' reference to τὸ τε τοῦ Βηλίου ἱερὸν (*Antiq.* X 11) is without interest to us as he is speaking of the building operations of Nebuchadnezzar II.

this great project had not, according to Arrianus VII 17, proceeded very far. But that clearing work was in progress on the immense site of Esagila even after Alexander's death in 323, is seen partly from a Neo-Babylonian text¹ dated in *A-lik-sa-an-dar da-du's*² 6th year, where a receipt is given for the removal of gravel from the ruins on the temple site, partly from a Neo-Babylonian chronicle concerning the Diadochi³ in which, in an unfortunately very dilapidated context, work is three times mentioned which was carried out in connection with the ruins of Esagila: *šatti šiatī epēri ša E-[sag]-ila . . .*,⁴ dated in Philippos' 4th, Alexander's son's 6th and 8th years, i. e. 321–20, 317–16, 315–14.

The struggle of the Diadochi for the empire of Alexander, however, stopped the re-erection of Esagila and brought down disaster on Babylon. Our sources for these struggles are in the main Diodorus Siculus, Plutarch's *Vitae* (Demetrios and Eumenes), as well as the Neo-Babylonian chronicle mentioned above in Note 3, which deals with Philippos Arrhidaios 4th–8th years, Alexander's son's 6th–9th years, and Selenkos' 1st year, i. e. the years 321/20–313/12 B.C. This text has come down to us in a very fragmentary condition. It furnishes us with valuable details but comparing it with other information we are faced with chronological problems, the solution of which is as yet controversial. Nevertheless perhaps we may be justified in drawing the following picture of the time from 323–312, while our principal interest of course centres round the fate of the city of Babylon during these years. It should, however, be premised that it is often very difficult to establish definite dates within this period.

At the death of Alexander, Perdikkas, who was chief hipparchus, wanted to await Roxana's confinement before a king was chosen for the new empire, but Meleagros, the only survivor of Alexander's original phalanx leaders, wanted a Macedonian king, not the child of a Barbarian woman, and proclaimed as king under the name of Philippos Alexander's half-brother Arrhidaios, a half-wit and epileptic. This led to serious quarrels between the infantry and the cavalry of Alexander's army which took the part of Perdikkas, until Eumenes, a Greek from Kardias who had been Alexander's army secretary, effected a compro-

¹ Bu 88–5–12, 619 (CT IV (1898), Pl. 39).

² *ddu*, "favourite, beloved", here in the sense of "beloved son".

³ BM 34660 + 36313 (Sidney Smith, *Babylonian Historical Texts* (1924), Pl. XV–XVII).

⁴ BM 34660 + 36313, Obv. 5. Rev. 12.33.

mise: Philippos and Roxana's unborn son were to rule the empire as joint kings; this actually meant that the regent had the whole power. After Perdikkas had done away with Meleagros in 323 he occupied the position of regent and then appointed the commanders from Alexander's army as vicegerents (satraps) in various parts of the empire. This started the antagonisms and conflicts between the royalist party and the regent on the one hand and, on the other side, the numerous satraps who wished to found a number of independent states ruled by themselves as kings. And at the same time quarrels broke out now and again within the royalist party itself. The final result of the wars of all these years was two new empires in Asia and Africa, under the Seleueids and the Ptolemies, but since the city of Babylon changed rulers several times between 323 and 312 and suffered very much in consequence, we must view this period from the banks of the Euphrates.

It was presumably Meleagros who in 323 made Archon satrap of Babylon, but when Perdikkas became regent he had him replaced by Doehimos. Perdikkas, after an unsuccessful expedition against Memphis with the object of putting down the Egyptian satrap Ptolemy who had allied himself with the Macedonian generals Antipatros and Krateros, was murdered by his own cavalry in the year 321. Antipatros then seized the power as regent and the same year convened a conference at Triparadeisos in Upper Syria.¹ Here old satrapies, as e. g. that of Ptolemy, were confirmed, and new appointments took place; thus Seleukos was made satrap of Babylon: ^{amtu}*rab puhri* ^{mtu}*Akkadi^{kl} ana Bâbili^{kl} êrub*². Now came a couple of peaceful years for the old metropolis. Seleukos continued to cart away the gravel from the ruins of Esagila in the 4th year of Philippos Arrhidaios (see p. 25 above), and in Philippos' 6th year he seems to have undertaken some building operations.³ But the peaceful times by the Euphrates were soon to come to an end.

The new royalist party under the leadership of Antipatros had a dangerous opponent in Asia in the old royalist circle led by Eumenes after Perdikkas' death. Eumenes who was satrap of Cappadocia after 323 was also commander of the cavalry of the Royal Guard, the *ἀγυρο-ἀσπίδες*. Antipatros appointed Antigonos strategus of Asia⁴ with the

¹ Diodorus Sic. XVIII 39.

² BM 34660 + 36313, Obv. 5.

³ *Ibid.* Obv. 9-11.

⁴ Diodorus Sic. XVIII 40.

object of putting down Eumenes. But at the death of Antipatros in 319 the whole situation changed. Antipatros' son Kassandros being passed over, Poly(s)perchon became the new regent. He supported Eumenes against his two antagonists, Kassandros in Europe and Antigonos in Asia. Further Poly(s)perchon joined Olympias, Alexander's mother, Roxana, and Alexander's son, unlike Antipatros' circle who regarded Philippos Arrhidaios as supreme ruler of the kingdom. At first Eumenes advanced triumphantly, and in October 318, in Philippos Arrhidaios' 7th year, the royal troops, led by Eumenes, captured the palace of Babylon: *šattu 7^{kam} mPi-il-i-si^{arhu} Tašrīti^{amēlu} ummāni šarri . . . šal-lum ē-kal Bābili^{kl} i-kim-šu-nu-ti-ma¹* Neither Diodorus Sic. nor Plutarch mentions Eumenes' invasion in or taking of Babylon, and since we read in the Neo-Babylonian chronicle, so often quoted above in reference to the Diadochi, about Seleukos' counter measures after the taking of the palace,² we may perhaps venture to draw the conclusion that Eumenes captured the "Northern Palace" and the "Southern Palace" protected by the latter. Eumenes then marched on towards Susa and Persepolis in order to fight Peithon, Agenor's son, who had been appointed satrap of Media and India at the Triparadeisos meeting in 321. But Antigonos followed him and after several battles in the Gabiene district³ Eumenes was finally defeated at Gadamarga in 316, and his own Argyraspides surrendered the Greek "scribe", hated by all Macedonian generals, to Antigonos, who had him put to death.

While the fight between Eumenes and Antigonos was going on in western Iran, Seleukos at first tried in vain to recover Babylon's citadel from Eumenes' occupational troops: *mSi-lu-uk-ku . . . ē-kal kâtā¹¹-šu lā ikšuda⁴*. But the conquest was accomplished and Seleukos was master of Babylon when Antigonos after his victory marched into the city in 316: [*mAnti-*] *gu-nu-su ib-balkit-ma ana . . . bi-rit E-sag-gil ū bīt a- . . .⁵*. Seleukos feasted all his army and bestowed royal gifts on Antigonos, but when the latter demanded that he should render an account of the revenues of the country, Seleukos declared that he was not accountable

¹ BM 34660 + 36313, Obv. 13-14.

² *Ibid.* Obv. 15.

³ Diodorus Sic. XIX 27-31.

⁴ BM 34660 + 36313, Rev. 4-5.

⁵ *Ibid.* Rev. 21-22. I cannot agree with Sidney Smith, *Babylonian Historical Texts* (1924), p. 141, when he supplies *bīt a- . . .* to *bīt a-kl-ti* since the distance between *E-sag-la* and *bīt akltu* (see S. Palls, *The Babylonian Akltu Festival* (1926), pp. 112-114) excludes the use of the derived preposition *bīrit*.

to anybody for the satrapy given him by the Macedonians as a reward for his services in Alexander's army.¹ The ensuing struggle between Antigonos, who was victorious, and Seleukos, who fled to Egypt, was fatal to Babylon. There was weeping and mourning in the land: *bi-kiš ū si-ip-du ina māti iššak(k)an*,² for Antigonos pillaged the town and country: *hubut āli ū šēri iḥbut*³ and put the people (i. e. the town) to fire: *nišē iḫḫur illi išāti*⁴. After the destruction of Babylon in the year 316 Antigonos marched to Cilicia, having made Peithon of Sind satrap of Babylon;⁵ another Peithon, his ally in the fight against Eumenes, was put to death the same year (316) by Antigonos.

As regards high politics too, the year 316 was noteworthy. The year before, Poly(s)perchon had caused Philippos Arrhidaios and his consort Eurydice to be murdered, but Eumenes' unsuccessful campaign and death in Asia made a change in Poly(s)perchon's position. Antipatros' son Kassandros seized the reins of power in Macedonia and caused Olympias to be murdered (316). In order to protect himself against the power of Kassandros Poly(s)perchon opportunely allied himself with Eumenes' victor Antigonos, who was master of Asia. But in Egypt Kassandros formed an alliance with Ptolemy and Seleukos who had fled to that country, and in the battle of Gaza Antigonos' son Demetrios Poliorketes was completely routed in the year 312. The next year Kassandros had Roxana and Alexander's son put to death, and the regency thus coming to an end, he was henceforth ruler of Alexander's European possessions, so that in 310 he could give the former regent Poly(s)perchon a small military command in the Peloponnesus.

In 312 Seleukos returned to his satrapy after the victory at Gaza, and upon his entry into Babylon was welcomed with general rejoicing.⁶ Antigonos' Babylonian satrap Peithon had fled but had entrusted the defence of the city's citadel, *ἄκρα*, to Diphilos. Seleukos began the siege and captured the citadel: *ὁ δὲ Σέλευκος συστησάμενος πολιορκίαν καὶ κατὰ κράτος ἐλὼν τὴν ἄκραν*.⁷ During these conflicts Babylon suffered much,

¹ Diodorus Sic. XIX 55.

² BM 34660 + 36313, Rev. 26.

³ *Ibid.* Rev. 27.

⁴ *Ibid.* Rev. 29; perhaps the chronicle refers to later ravages and destructions in Babylon in the years 310-309, 302-301, see p. 29 below and the literature cited p. 29^a.

⁵ Diodorus Sic. XIX 56.

⁶ *Ibid.* XIX 91.

⁷ *Ibid.* XIX 91.

the oft-cited Neo-Babylonian chronicle concerning the Diadochi mentions weeping and mourning in the country.¹ After re-capturing his city Seleukos extended his Babylonian satrapy by eastward campaigns in Iran, going even as far as the borders of India. During his absence Antigonos attempted once more to make himself master of Asia, sending his son, Demetrios Poliorketes, with 5000 Macedonian infantry, 10,000 mercenaries, and 4000 cavalry against Babylon.² Seleukos' deputy Patrokles dared not engage in a fight; he abandoned the city which was taken and pillaged by Demetrios after he had stormed one of the citadels: ὁ δὲ Δημήτριος ἐπειδὴ παραγενόμενος εἰς Βαβυλῶνα τὴν πόλιν ἐκλελειμμένην εὗρεν, πολιορκεῖν ἐπεχείρει τὰς ἀκροπόλεις. ὣν τὴν ἑτέραν ἔλων ἔδωκε τοῖς ἰδίοις στρατιώταις εἰς διασπαρῆν.³ When Demetrios had besieged the other citadel⁴ for some days (ἡμέρας τινάς) he left his friend Archelaos to carry on the siege with 5000 men and 1000 cavalry, and marched westward. We do not know whether Archelaos carried out his project or when Seleukos returned to Babylon. Demetrios' siege of the citadels of Babylon seems to have taken place from April 310 to July 309⁵ and forms part of Antigonos' second struggle for the Empire. And at the decline of his career, during Seleukos' absence, Antigonos once more ravaged Babylon with a military detachment, which occupied Babylon from 6th August 302 to 7th March 301.⁶ But in the spring of 301⁷ Antigonos met his fate when he fought the coalition of Seleukos and Lysimachos, king of Thrace, and at Ipsos he was defeated and killed in the battle. We know that Seleukos, like Ptolemy in Egypt, assumed the title of king some time between 307 and 305;⁸ but that Seleukos considered the first entry into and capture of Babylon (312) as the crucial year in his reign appears from the fact that the date 1/10 312 is

¹ BM 34660 + 36313, Rev. 39-40.

² Diodorus Sic. XIX 100.

³ Ibid. XIX 100.

⁴ Diodorus Sic. XIX 91 mentions ἀρχα, which Seleukos takes from Diphlios, and which perhaps may be identified with the "Northern Palace"; here in XIX 100 Diodorus Sic. refers to ἀκροπόλεις. Perhaps it is the second citadel, Nebuchadnezzar's huge fortification west of the palace.

⁵ W. W. Tarn, *JHS* XLIV (1924), p. 287, W. Otto, *Sitzungsber. d. Bayer. Acad. d. W. Jhrg.* 1925, pp. 9-12, S. Smith, *RA* XXII (1925), pp. 179-197, W. W. Tarn, *Classical Review* XI (1926), pp. 13-15 and in *CAH* VI (1927), Ch. XV.

⁶ F. X. Kugler, *Von Moses bis Paulus* (1922), pp. 305 ff.

⁷ Ibid. pp. 307 ff.: April 300 B.C.

⁸ Diodorus Sic. XX 53.

regarded in the Seleucid era as the year when the Seleucid supremacy was established in Nearer Asia and Persia.

The destruction wrought at Babylon under Xerxes (some time between 480 and 476), under Antigonos (316), and during the military events in the years 312, 310–09 and 302–01, was of such a kind that some time between 307 and 300 Seleukos founded a new capital for his empire, Seleucia.¹ It was situated c. 90 km north of Babylon on the right bank of the Tigris, and many of Babylon's inhabitants were transferred as colonists to the new city: τοῦτο δὲ Σελεύκειαν οἰκίσας ἐπὶ Τίγρητι ποταμῷ καὶ Βαβυλωνίους οὕτως ἐπαγόμενος ἐς αὐτὴν συνοίκους.² The rise of this city was a severe blow to Babylon, and the Babylonians cannot have regarded the continual and increasing desolation of their city with indifference. We may receive an impression of the general feeling during Seleukos' reign when we recall that a Neo-Babylonian cuneiform tablet, dated Babylon, 15. Ulûlu, the 25th year, i. e. 287 B.C.,³ is a copy of a text from the time about 2187–2097 B.C., in which Uruk, Agade, Kish, Hursagkalama, Nippur, and other cities bewail the invasion and domination in the country of the Gutians coming from the east.⁴

Under Seleukos' successor Antiochos I (281–262/1), in the 37th year of the Seleucid era, i. e. 275 B.C., Seleucia on the Tigris became the Royal City: ^{du}Si-lu-ku³-a ál šarrû-tu ša ina eli ^{nāru}Idiglat.⁵ By that governmental act Antiochos put an end to Babylon's civil existence. As a kind of compensation for this step he commenced the re-erection of Esagila in the same year by having bricks made in great number [in villages] both north and south of Babylon: šatti šiatī libnāti ma'dû-tum a-na e-piš ša E-sag-[ila] eliš Bābili^{kl} ū šaplīš Bābili^{kl} li-ib-[nu-ni].⁶

¹ After Seleucia had been captured by the Parthians in 140 B.C. It later became a bone of contention between the latter and the Romans, was i. a. captured by Trajanus in 116 A.D. and completely destroyed by Lucius Verus' general Avidius Cassius in 165 A.D.

² Pausanias I, 16,3.

³ Cf. D. Sidersky, *Contribution à l'étude de la chronologie néo-babylonienne* (RA XXX (1933), pp. 57–70) and R. A. Parker and W. H. Dubberstein, *Babylonian Chronology 626 B.C.–A.D. 45* (1946; SAOC No. 24).

⁴ Th. G. Pinches, *The Old Testament* . . . (2. ed. 1903), pp. 477 f.

⁵ BM 92689, Rev. 16; the text which is dated in the 38th year, i. e. 274 B.C., was published by J. N. Strassmaier, ZA VI (1891), pp. 234–36, in a fresh copy with a number of corrections by Sidney Smith, *Babylonian Historical Texts* (1924), Pl. XVII.

⁶ BM 92689, Rev. 19. Berossus (c. 330–c. 260), a native priest of the temple of Marduk in Babylon, dedicated a work written in Greek *Βαβυλωνιακά* to Antiochos I, in which he records the history of Babylonia from before the Flood to Alexander the Great, but

In this way Antiochos I provided the Babylonians with a sacred rallying place, which was to survive until about 93 B.C. Nearly at the same time, in the 43rd year, i. e. 269 B.C., he restored or re-erected the Ezida temple in Borsippa, and in the same year laid the foundations both of Esagila and Ezida: *a-na na-di-i uš-šu ša E-sag-il á E-zi-da*.¹

Another attempt to gain the favour of the inhabitants of Babylon was the great gift, consisting of landed property and valuables, which Seleukos II (246–27) in the 75th year, i. e. 237 B.C., presented to Babylon, Borsippa, and Kutia through the medium of his consort Laodike: *Lu-da-ki-e aššati-šu^m Si-lu-ku . . . ana^{amēlu} Bábilaia^{amēlu} Borsippaia^{amēlu} Kutiaia id-di-nu² á iš-lu-ru³*.² Esagila is mentioned in the deed of gift, which emphasises that the gift is to be Babylonian temple property eternally: *Lu-da-ki-e . . . a-na e-piš damḫāti ša-nu-miš Bábilaia zēri-šu-nu dam-ka-tum li-iz-zak-ru . . . li-iz-zi-za-šu-nu-lu a-na u-mu ša-a-tum*;³ I think it defensible here to interpret *damḫāti* as "pious acts", i. e. such as will benefit the temples and their priests. The fact that this deed of gift was copied in the 139th year, i. e. 173 B.C., under Antiochos IV Epiphanes (175–164), shows us that the Seleucid rulers wished to emphasise that the wording of the deed of gift was still valid, and that Esagila was still the sacred centre of Babylon. Under Antiochos Epiphanes, who in Neo-Babylonian cuneiform texts is called the Founder of the City and the Saviour of Asia, a Greek colony was founded in Babylon with a theatre⁴ and gymnasium. In addition new laws were enacted which regulated business relations and royal currency.

The Macedonian dynasty of the Seleucids was, however, soon to see the loss of the eastern part of its dominions. The middle of the 3rd century B.C. saw the rise of the Bactrian kingdom, whose royal house was Hellenic, as an independent state in eastern Iran, and almost at the same time a new Iranian state grew up on the steppes of Turkistan.

wherein he unfortunately tells nothing about the historical events contemporary with his own lifetime; fragments of his work are only known as transmitted by Josephus, Eusebius, Alexander Polyhistor, and Georgius Syncellus.

¹ BM 80, 6–17, 112; the text, a clay cylinder from Birs Nimrūd, has been published in V R (1884), Pl. 66.

² Obv. 8–9 of the Neo-Babylonian text which C. F. Lehmann, ZA VII (1892), p. 330^a published in transcription; it is dated in the 139th year, i. e. 173 B.C. under Antiochos IV Epiphanes, but calls itself a copy from the 8th Addaru in the 75th year, i. e. 237 B.C. E. Unger, *Babylon* (1931), p. 168, only mentions the copy from 173 B.C.

³ *Ibid.* Rev. 2–5.

⁴ R. Koldewey, *Das wieder erstehende Babylon* (1913), pp. 193 ff.

Arsakes, descended from the Iranian nomadic tribe of the Dahan Seyths, about 256 B.C. founded the dynasty of the Arsacids.¹ While he himself only ruled over a small area, his successors extended their power to Parthia, the landscape east of the old Media and south-east of the Caspian Sea, approximately identical with the modern Iranian landscape Khorasan, after which the Arsacid house has been called the Parthian dynasty (256 B.C.—226 A.D.). During continual fighting with the Seleucids the Arsacids seized larger and larger parts of the Iranian area.

The southern Mesopotamian region had from Early Dynastic times to 538 B.C. experienced conquering incursions from the east by the Awanites, Gutians, Kassites, and Achaemenian Persians. After Mithridates I (c. 170–136) had ascended the Parthian throne as Arsakes VI the Mesopotamian possessions of the Seleucids came into the danger zone. In the period between 161–122 B.C. the struggle for power fluctuated up and down until it ended in the complete victory of the Parthians. Of this period of unrest we have few details; our knowledge is due partly to scraps of information gathered from several classical authors partly to coins struck by the reigning kings, which give us their exact names and can often be dated. Of the fate of the ancient metropolis of Babylon in this period we have the following particulars.

(1) In 161–160 Timarehos, a satrap of Media, had proclaimed himself King of Babylon; some coins were issued by this usurper.² Timarehos was not the original form of the name but was nothing but a Grecian paronomasia; the same applies to the names mentioned below such as Hyspaosines, Eumeros, Himeros. Antiochos Epiphanes was seldom in Babylon. He led four campaigns against Egypt, which the Romans forced him to abandon in 168, and fought the Jews in Palestine (167–66), besides fighting in the eastern provinces where he died at Tabac in Persia in 164. We should therefore give credence to Appianus XI, 8,45 where it is recorded that Antiochos set up the above-mentioned Timarehos as deputy ruler of Babylon. The date of this decision cannot be fixed. On the other hand it is probable that after the death of Antiochos Epiphanes the mutual quarrels of the Seleucids Antiochos V, Demetrios I, and Alexander Balas gave Timarehos an opportunity of setting himself up as absolute monarch of Babylon.

¹ All the 31 kings of the dynasty added the title Arsakes to their names, see Strabo XV, 1, 36; the Ἀρσάκης mentioned by Diodorus Sic. XXXIV 603 is Phraates II.

² E. Drouin, *Notice historique et géographique de Characène* (1890), p. 17.

(2) In the year 160 the Seleucid king Demetrios I (162–150) recaptured Babylon and had Timarchos executed: *καὶ Τίμαρχον ἐπανιστάμενον ἀνελών, καὶ τὰλλα πονηρῶς τῆς Βαβυλῶνος ἡγούμενον*.¹

(3) During the years 153–140 Mithridates I created the Parthian empire by taking Media and Babylonia as far as the Euphrates from the Seleucids. Babylon was taken from Demetrios II (145–139) in July 141. But in the month of December 141 a Bactrian invasion caused Mithridates I to flee to Hyrcania, the modern Persian district of Gurgân south-east of the Caspian Sea. As a result of this Demetrios II invaded Mesopotamia late in 141 or early in 140; he won some victories and recovered Babylon. But after his victory over the Bactrians Mithridates I turned towards the lost western provinces, defeating and capturing Demetrios late in 140 or early in 139. After the recovery of Babylon Seleucia now also fell into the hands of the Parthians. On the other side of the Tigris, just opposite Seleucia, the latter then made a strongly fortified camp, Ctesiphon, which under Trajanus and Lucius Verus shared the fate of Seleucia², and was taken, together with Babylon, by Septimius Severus, by a concerted attack in 198 A.D.³ but later became the place where the Sassanids, particularly Shapur I (241–272) built the capital of their western empire; it was laid waste by the Arabs in 641 A.D. Thus after the year 139 all the regions east of the Euphrates (Babylonia, Messene, Characene, Elymaea, and Persia) were in the hands of Mithridates I. But in the period from July 141 til late in 140 (or early in 139) the city of Babylon had three times changed rulers.

(4) Upon the death of Mithridates I in the year 136, the balance of power in Mesopotamia shifted; the Seleucid Antiochos VII Sidetes, who is given the epithet Euergetes on coins, recaptured parts of the western possessions of the Parthians in the period 136–129 B.C. and was ruler of Babylon from 130 to 129 B.C.⁴

(5) The Parthian king Phraates II (136–127), however, shortly afterwards secured supremacy for his country by routing Antiochos Sidetes, who was killed in battle in 129 B.C. But the city of Babylon was not immediately recovered by the Parthians, for at the death of Antiochos Sidetes the province of Characene broke away and attained indepen-

¹ Appianus XI, 8, 47.

² See above p. 30 note 1.

³ Zosimus I, 8, 2: *ἐφόδω μὲν Κτησιφῶντα εἰς καὶ Βαβυλῶνα*.

⁴ F. X. Kugler, *Von Moses bis Paulus* (1922), pp. 338, 343.

dence under Hyspaosines, one of the satraps of Antiochos. Hyspaosines enlarged his new realm by a number of the towns of Messene, and founded a new capital, Spasinou-Kharax¹ on the lower course of the Tigris on the original site of the sea-port town of Alexandria from Alexander's time, which was rebuilt about 204 by Antiochos III (223–187) after its destruction by the waters of the river, and was called Antiochia. It is said to be the modern Mohammera near the Karûn river. In the years 127–126 Hyspaosines called himself King of Babylon,² and had his own coins struck.³ Hyspaosines' conquest of Babylon was the fifth since July 141. Taking this into consideration, as well as the fact that since the foundation of Seleucia, particularly after 275, the city experienced increasing desolation⁴, it is most interesting that in a Neo-Babylonian text⁵ dated in the year 185 of the Seleucid era, i. e. 127 B.C., hence in one of the years of the rule of Hyspaosines, we hear of Esagila,⁶ its steward,⁷ and its college of priests⁸, which is called the Anu-Enlil priesthood⁹. We likewise learn from the text that the religious functions of the temple were still maintained: *"Itti-^{ulu} Marduk-balâlu^{amêlu} rab bânu elî âli^{amêlu} ub-bu-di-e-tu ša bitâte ilâni*.¹⁰ Here it is stated that Itti-Mardukbalaṭu, one of the distinguished free men of the city,¹¹ has been charged with the maintenance of the cultic functions of the temples on behalf of the town. *Ubbudêtu*, presumably, means "(ritual) service", and even though the feminine abstract ending¹²

¹ "The Stronghold of Spasinos", which name shows us Spasinos as a Greek parallel to Hyspaosines; a Neo-Babylonian text (in W. Lucas' private ownership and published with transcription and translation by Th. G. Pinches, *BOI* IV (1889–90), pp. 131 ff.) has the form *Aspasinê* of the name.

² The Lucas-Pinches text (see note 1), L. 5 and 12 *As-pa-si-ni-e šarru*.

³ A series of bronze coins of Mithridates II dated 122/1 are overstruck on Hyspaosines' money, cp. also E. T. Newell, *Numismatic Notes and Monographs* No. 26 (1925) and *CAH*, Vol. of Plates IV (1934), p. 9.

⁴ See above, p. 30.

⁵ See above note 1; the Lucas-Pinches text has again been published in transcription and translation by E. Unger, *Babylon* (1931), pp. 319 ff.

⁶ The Lucas-Pinches text, 7.8.18.

⁷ *šatammu*, Sumerian loan word.

⁸ The Lucas-Pinches text, 8.18 *amêlu puhru ša E-sag-gil*.

⁹ *Ibid.* 11.27 *amêlu šangûtu An-na En-lil-la*. Whether the change from the name of Marduk is connected with Xerxes' carrying off of the principal statue of the god, as stated above p. 22, cannot be decided.

¹⁰ *Ibid.* 9–10.

¹¹ Cp. M. San Nicolò und A. Ungnad, *Neubabylonische Rechtsurkunden* (1935) I, pp. 23^a, 104^a.

¹² Cp. also VR 19,43: Sum.SAG.SAL = *eru* = Akk. *abdu*, slave woman.

causes difficulties, we imagine that it is derived from the West Semitic loan word *abdu* "slave, servant" occurring in Assyrian; compare, with the assimilation of *-bd-* to *-bb-*, Ass. *abbul(t)um*, "(1) slave's hair-dress, (2) chain".

(6) However, the Characene ruler Hyspaosines' sway in Babylon was short-lived. It is true that Hyspaosines, his son Ti'imutusu, and his generals defeated the Elamites who made incursions in the neighbourhood of the Tigris, captured Elam, and killed its sovereign Pittit, but the Parthians were more powerful opponents. Phraates II, who, as stated above, had defeated Antiochos Sidetes in the year 129, had to turn eastward to fight his Scythian mercenaries. During this campaign he fell in the same year, but before the expedition he had chosen the Hyrcanian Himeros¹ to restore the Parthian supremacy from the time of Mithridates I in the provinces of Babylonia, Messene, and Characene: *Igitur Phrahates cum adversus eos profiscisceretur, ad tutelam regni reliquit Himerum quendam pueriliae sibi flore conciliatum, qui tyrannica crudelitate oblitus et vitae praeteritae et vicarii officii Babylonios multasque alias civitates inopportune vexavit.*² By Himeros' triumphant campaign in Mesopotamia a death blow was struck at the ancient city of Babylon; he put to fire and sword the cities of Messene and Characene. As regards Babylon Diodorus Sic. XXXIV 603 says: He sent many of the inhabitants of Babylon away to Media as slaves; he set fire to the market-place of Babylon and to some of its temples, and completely destroyed the better (or the stronger) part of the town, πολλοὺς δὲ τῶν Βαβυλωνίων . . . εἰς τὴν Μηδίαν ἐξέπεμψε . . . καὶ τῆς Βαβυλῶνος τὴν ἀγορὰν καὶ τινὰ τῶν ἱερῶν ἐτέπηρε καὶ τὸ κράτιστον τῆς πόλεως διέφθειρε. From Posidonius of Apameia's *ἱστορίαι* in 52 books now lost, a kind of continuation of Polybius' historical work, Athenaeus records in XI p. 466b that Himeros rules not only over the people of Babylon, but also over the inhabitants of Seleucia: . . . "Ἱμερον τὸν τυραννήσαντα οὐ μόνον Βαβυλωνίων ἀλλὰ καὶ Σελευκέων . . . We cannot establish the date of the destruction of Babylon and the fall of Hyspaosines, we merely know that the event took place some time between the years 126 and 123. It would seem that Himeros, at a certain date after 126, assumed the title of King of Babylon with the qualification of Arsacid, that in the years

¹ Athenaeus XI p. 466 b, Junianus Justinus XLII, 1,3, whereas Diodorus Sic. XXXIV 603 calls the Hyrcanian *Εὐήμερος*.

² Justinus XL II, 1,3.

124/23 he struck his own coinage, tetradrachms with his portrait and an inscription *ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΑΡΣΑΚΟΥ ΝΙΚΗΦΟΡΟΥ*,¹ and that it is perhaps due to him that the Arsacid era, which is 64 years later than the Seleucid era, from the year 123 is given in Neo-Babylonian cuneiform texts side by side with the latter.² In what relation Himeros stood to the Parthian king Artabanos I (127–124), the successor of Phraates II, cannot be decided. But his role as independent ruler of the land of the two rivers was soon played out. For in the year 122 B.C. Mithridates II (124–88), the succeeding Parthian king, conquered Seleucia, recaptured Babylon, and extended his dominion to the Euphrates.

In the period from 161 to 122 Babylon thus changed rulers nine times. The town which had already during the struggle between Antigonos and Seleukos suffered great damage, and became depopulated after Seleucia had been officially raised to the dignity of capital in 275, can therefore in the year 122, a couple of years after Himeros' ravages, only have presented a pitiable sight, desolate and despoiled as it was. There are in existence a number of Neo-Babylonian texts from the Arsacid era after 122 B.C., but unfortunately they are all more or less damaged and mutilated. However, from one of them, dated in the 155th year, i. e. the 219th year of the Seleucid era, i. e. 93 B.C., it would appear that at any rate parts of Esagila were still used for religious services,³ just as it appears from unpublished Arsacian texts that sacrifices took place in the old temple⁴. But after Himeros' violent dealings with the city only a small part of Babylon was presumably inhabited,⁵ to whose population the ritual temple cult must have been a symbol to gather round. In the period after 93 B.C. all primary information about the city⁶ and the temple disappears.

On the other hand, a number of classical authors draw an unambiguous picture of Babylon in the 1st century B.C. and the time that follows. It is a desolate and abandoned city, of which alone the fortified walls are left, and it was thus not until the 1st century B.C. that

¹ *CAH*, Vol. of Plates IV (1934), p. 9 g.

² A. É. J. B. Terrien de Lacouperie, *BOR* IV (1889–90), pp. 136–144.

³ J. N. Strassmayer, *Arsaciden-Inschriften*, p. 146 No. 7. (*ZA* III 1888).

⁴ Cp. Th. G. Pinches, *The Old Testament* ... (2. ed. 1903), p. 484.

⁵ Cp. Diodorus Sic. II 9: καὶ γὰρ αὐτῆς τῆς Βαβυλωνος οὐκ ἔστιν ἄλλο τι μέγας οἰκεῖται, τὸ δὲ πλεῖστον ἐν τῷ τείχεϊ γεωργεῖται.

⁶ Only the name of Babylon is mentioned by Zosimus in reference to Septimius Severus' attack on Seleucia, see p. 33 note 3.

Babylon became a ruin similar to that to which Nineveh was reduced in 612 B.C. Diodorus Sic. II 7–10 has a lengthy description of Babylon, based throughout on early Greek sources, where he speaks of its former glory. But Diodorus Sic., who writes in the 1st century B.C., at the same time carries his narrative up to date when he says that it is impossible to give an exact description of the Zeus temple (i. e. Esagila), since it has sunk into ruins in the course of time: καὶ τοῦ κατασκευάσματος διὰ τὸν χρόνον καταπεπτωκότος, οὐκ ἔστιν ἀποφῆρασθαι τὰκριβές (II 9). And as regards the royal palaces¹ and other buildings they have fallen on evil days and are reduced to ruins so that only a small part of Babylon is still inhabited, while the greater part of the space within the walls has been transformed into arable land: τῶν δὲ βασιλείων καὶ τῶν ἄλλων κατασκευασμάτων ὁ χρόνος τὰ μὲν ὀλοσχερῶς ἠφάνισε, τὰ δ' ἐλυμήνατο· καὶ γὰρ αὐτῆς τῆς Βαβυλῶνος νῦν βραχύ τι μέρος οἰκεῖται, τὸ δὲ πλεῖστον ἐντὸς τείχους γεωργεῖται (II 9).

Strabo (63 B.C.–19 A.D.) XVI, 1,5, records that Σέλενος ὁ Νικάτωρ built Seleucia, and that his successors favoured the city and transferred their residence to it; it was now larger than Babylon, which for the most part was empty and desolate: καὶ δὴ καὶ νῦν ἡ μὲν γέγονε Βαβυλῶνος μείζων, ἡ δ' ἔρημος ἡ πολλή . . . ἐρημία μεγάλη ὅστιν ἡ Μεγάλη πόλις. Further he mentions Belos' tomb, now destroyed: ἔστι δὲ καὶ ὁ τοῦ Βήλων τάφος αὐτόθι, νῦν μὲν κατεσκαμμένος; here Strabo undoubtedly alludes to Etemenanki, since he calls the tomb a four-sided pyramid: ἦν δὲ τετραγώνος, and is familiar with pyramids as tombs from Egypt. Of the desolate ruined city only the walls are left as a witness to former greatness. Strabo describes the city walls as being 67½ km in circumference, while their thickness is 9.8 m, their height 23 m and the towers rise 27.7 m above them, and he counts the wall of Babylon among the seven wonders of the world: διόπερ τῶν ἑπτὰ θαυμάτων λέγεται καὶ τοῦτο.

In contrast with Diodorus Sic. and Strabo, Pliny (23–79) declares in his *Historia Naturalis* VI, 26, 121, that the temple of Jupiter Belos is still standing, but in all other respects the place has gone back to a desert, having been drained of its population by the proximity of Seleucia,

¹ The fight about these under Eumenes (318), Seleukos (316), Antigonos (316), Seleukos (312), Demetrios (310–309), Seleukos (after 309), Antigonos (302–301), during the wars between the Seleucids and the Arsacids (161–122), in which Himeros' ravages are the climax, explains their ruinous state at Diodorus Sic.'s time.

founded for that purpose by Nicator: *durat adhuc ibi Iovis Beli templum . . . cetero ad solitudinem rediit exhausta vicinitate Seleucia ob id conditae a Nictore*. Pliny further describes the huge city walls, of which there are two, with a circuit of 60 miles, each wall being 200 feet high and 50 feet wide. We are grateful for the 37 books which constitute Pliny's sole surviving work because they furnish us with numerous particulars in fields which are rarely treated by classical authors. But this material has been gathered from numerous sources, and since he was a non-expert in nearly all fields, his judgment often fails him. His description of the desolate city, depopulated by the rise of Seleucia, and of Esagila as the existing religious rallying-point of the city, may be based on sources from the period 275-127, but hardly from the 1st century B.C. or from his own century.

That Pausanias Periegeticus, who wrote in the 2nd century A.D. can be cited as supporting Pliny I hardly believe. Pausanias was a Greek topographer and local historian, and classical philology is greatly indebted to him, but we cannot credit him with any real insight into history and topography outside Greece. In VIII, 33,3, where he sets forth his reflections on the former grandeur of disintegrated cities, such as Mycenae, Nineveh, and Thebes in Egypt, he says that at Babylon the sanctuary of Bel remains, but of that Babylon which was once the greatest city that the sun beheld, nothing is left but the walls: *Βαβυλῶνος δὲ τοῦ μὲν Βήλου τὸ ἱερόν λείπεται, Βαβυλῶνος δὲ ταύτης, ἣντινα εἶδε πόλεων τῶν τότε μεγίστην ἡλῖος, οὐδὲν ἔτι ἦν εἰ μὴ τεῖχος*. His description of the desolate city and the immense walls agrees with Diodorus Sic., Strabo, and Pliny, whereas we must suppose that Pliny's as well as Pausanias' statement about Esagila can hardly be credited in the light of our knowledge partly of Himeros' destruction of Babylon (see above p. 35) in the period between 126 and 123, partly of the earlier explicit statements of Diodorus Sic. and Strabo, about the disintegration of the Esagila buildings. And presumably Pausanias is merely repeating in this book on Arcadia what he stated at the beginning of his Periegesis about Babylon at the time of Seleukos I (see above p. 30 note 2): *ὑπελείπετο μὲν τὸ τεῖχος Βαβυλῶνος, ὑπελείπετο δὲ τοῦ Βήλ τὸ ἱερόν* (I, 16,3).

Our view is also supported by the last classical author to be mentioned, Lucianus of Samosata (c. 129-c. 180), contemporary with Pausanias. In the dialogue between Hermes and Charon he finally harps on a similar theme to that mentioned under Pausanias: cities renowned

in olden times have long since perished. Above, p. 19, we cited what was said about Nineveh; after which Lucianus continues in XII 23: But there is Babylon, the well-towered city with its enormous wall, before long it will be as hard to find as Nineveh, ἡ Βαβυλῶν δέ σοι ἐκείνη ἐστὶν ἡ εὐπυργος, ἡ τὸν μέγαν περιβολόν, οὐ μετὰ πολὺ καὶ αὕτη ζητηθησομένη ὥσπερ ἡ Νίνος. It is of great interest that Lucianus here uses the rare Greek word εὐπυργος about Babylon in his time. Εὐπυργος only occurs once in Homer in the Ilias VII 71¹

εἰς ὃ κερ ἡ ὑμεῖς Τροίην εὐπυργον ἔλῃτε,
ἡ αὐτοὶ παρὰ νηυσὶ θαμῆτε ποντοπόροισιν.

"Until either ye take well-towered Troy

Or yourselves be vanquished beside your sea-faring ships".

From this it appears plainly that εὐπυργος denotes the fortified towers of the city wall, and we should not, therefore, in the above-cited passage of Lucianus, think of tall temple towers visible from afar, but of one of the seven wonders of the world, in Strabo's parlance (see above p. 37), Nebuchadnezzar's outer city wall. This colossal construction² which is estimated to have been between 12 and 18 km in length, is only partly known from excavations, and especially the part situated to the east, running north-south. From this we see that the width of the construction was c. 27 m, that of the outer wall c. 8 m, that of the interspace 12 m, and of the inner wall 7 m. The fortification, the outer wall of which was built of burnt clay bricks, was provided with towers at intervals of 40-50 m. From military and architectural considerations we are led to estimate the height of the towers at between 12 and 18 m, and the number of towers at between 240 and 360. The inner city wall (length c. 8 km, width 17½ m, with 135 towers), says Herodotus III 159, was pulled down by Darius I when he captured Babylon (see above p. 21³): Δαρεῖος δὲ ἐπεῖτε ἐκράτησε τῶν Βαβυλωνίων, τοῦτο μὲν σφρων τὸ τεῖχος περιεῖλε καὶ τὰς πύλας πάσας ἀπέσπασε. But R. Koldewey's excavations in Babylon (1899-1917) have fully elucidated the character of this fortification. Lucianus then perhaps speaks of the enormous outer city wall with many towers as the only part that is left of Babylon's former glory.

¹ Cp. Hesiodus, *Sc. Herc.* 270 εὐπυργος πόλις and Pindarus, *Nem.* IV 20 ἰόπυργον.

² Fr. Wetzel, *Die Stadtmauern von Babylon* (1930; WVD OG 48).

Under the Sassanids (226–651), the successors of the Arsacids as rulers of Iran and Mesopotamia, the conflicts with the Roman empire were continued with decided success for the Persian dynasty. Julian the Apostate, who was Roman emperor from 361 to 363, also became acquainted with the strength of the Sassanids. In the great campaign against the latter in 363, during which he was killed, he marched with his troops from the south towards Ctesiphon which Shapur I, king of the Persians (241–272) had made his capital in the west. Julian must have been in the vicinity of the ancient Babylon and it may be the city wall of the latter which is mentioned by his historian Zosimus (2nd half of the 5th century) in *Néa istoria* III 23, where it is recorded that the army, after marching onward and passing a number of fortified places of no renown, arrived at a wall enclosing an area called the Royal Game Park, τῆς δὲ ἐπὶ τὸ πρόσω πορείας ἐχόμενος δῆγει μὲν καὶ ἕτερα οὐκ ὀνομαστά φρούρια, παραγίνεται δὲ καὶ εἰς περιβόλον ὃν βασιλέως θήσαν ἐκάλουν. In order to injure his enemies Julian had part of the wall broken down, and partly killed and partly set free the game. The name of Babylon is not mentioned¹. The idea of using the very large area (c. 12–18 km) which had already at the time of Diodorus Sic. been partly transformed into arable land (see above p. 37) for a preserve for the game which the Sassanian sovereign might wish to hunt was natural to the great king. The word περιβόλος, too, is suggestive; it was by this term that Lucianus² (see above p. 39) designated Babylon's enormous wall. The ultimate fate of the ancient metropolis as a gigantic game preserve can be visualised through Zosimus' narrative, because it is corroborated by S. Jerome († 420) in his *Commentaria in Isaiam*: *Babylonem fuisse potentissimam . . . refert Herodotus, et multi alii qui Graecas historias conscripserunt . . . ; exceptis enim muris coctilibus, qui propter bestias concludendas post annos plurimos instaurantur, omne in medio spatium solitudo est.*³ *Didicimus a quodam fratre Elamita, qui de illis finibus egrediens, nunc Hierosolymis vitam exigit monachorum, venationes regias esse in Babylone, et omnis generis bestias murorum ejus tantum anibitu coerceri.*⁴

¹ That Zosimus knows this and the approximate position of the town appears from his mention of the conquering of it by Septimius Severus, see above p. 33 note 3.

² On the other hand, Herodotus, Diodorus Sic., Strabo, and Pausanias use the term τεῖχος when referring to the walls of Babylon.

³ XIV 22–23.

⁴ XIII 20–22.

§ 3. The rediscovery of Nineveh was made by the very first known European traveller in the Near East, Benjamin son of Jonah, a Jewish rabbi of Tudela, in the kingdom of Navarre. In the 12th century (1160–1173)¹ he travelled to Palestine, from where he traversed the desert by way of Tadmur, crossed the Euphrates, and journeyed on to the Tigris, where he visited the Jews of Mosul: "Atque hæc urbs (Al-Mutsal, i. e. Mosul) Persiæ regni nunc initium est, amplitudinemque illam et magnitudinem antiquam retinet ad Hhidekel flumen sita, inter quam et Niniuen antiquam pons tantum interest: sed Niniue excisa funditus est: pagi tamen et castella multa sunt intra antiqui ambitus spatium."² A similar impression is recorded by Fra Ricoldo da Monte di Croce (Ricoldo Pennini) from a visit to Mosul in the spring of 1290 in his account of his travels:³ "Deinde vero longa spacia terrarum transeuntes, venimus ad *Niniuen*, ciuitatem grandem. Que grandis fuit longitudine, non latitudine; nam sita fuit in longum iuxta fluuium paradisi Tigridim. Ibi ostenderunt nobis montem, ubi stetit Ionas, et fontem, de quo bibeat. Unde et usque hodie dicitur fons lone. Ipsa vero ciuitas totaliter subuersa est, et apparent signa et fortificia. Est autum nunc reedificata ex alia parte fluminis, et dicitur *Monsal* (i. e. Mosul)".⁴ On the other hand, no mention is made of ruins or ruined cities in the narratives recording Marco Polo's and "John Mandeville's"⁵ journeys in Asia, in 1271–95 and 1322–56, respectively, despite their visits to Mosul and Baghdad.

About 400 years after Benjamin of Tudela, some time between $1\frac{1}{2}$ 1573 and $1\frac{1}{2}$ 1576,⁶ Leonhard Rauwolff of Augsburg, the Bavarian botanist and physician, spent several days in Mosul. He relates that a high round hill, directly outside the city, was entirely honeycombed, being inhabited by poor people. "An der stet und in der gegne hierumb, ist vor Jaren gelegen die mechtige Statt Nineve, welche . . . eine Zeitlang

¹ Benjamin of Tudela's account was written in 1178, printed in Hebrew in 1543, Latin version in 1575.

² *Itinerarium Beniamini Tudelensis* . . . (1575), p. 58. The Bavarian rabbi Pethahiah of Ratisbon († 1190) also visited Mesopotamia and in his reminiscences (published in Hebrew in 1595, Engl. ed. 1856) mentions that Nineveh is a heap of ruins, but does not localise it.

³ Published by Vincenzio Fineschi in 1793, see also *Peregrinatores Medii Aevi quatuor* . . . rec. J. C. M. Laurent (1864), pp. 101–141.

⁴ *Peregrinatores Medii Aevi quatuor* . . . (1864), pp. 123–24.

⁵ The name of Mandeville was probably fictitious.

⁶ A. Parrot, *Archéologie mésopotamienne* I (1946), p. 14.

... die Hauptstatt in Assyrien gewesen".¹ Benjamin of Tudela's and Rauwolff's observations, which had both been printed when Abraham Ortelius published his great geographical work in 1596,² presumably form the basis of the latter's statement that certain writers identified Nineveh with Mosul, a version of the above-mentioned travellers' accounts which is not quite correct.

The identification of the mounds of ruins near Mosul with ancient Nineveh was indeed supported by a vague local tradition, whereas owing to the almost universal ignorance in Europe of Arab geographers (e. g. Abulfeda, Ibn Hauqal, Ya'qûbî, Yâqût), their accurate indications of the position of ancient Mesopotamian cities remained unheeded until the sites had been identified. The rediscovery of Nineveh in the vicinity of Mosul was also made by the following travellers, though we cannot decide whether their observations are independent of those of their predecessors or are due to local tradition: Anthony Sherley (1599),³ John Cartwright (1601),⁴ Pietro della Valle (1616-25),⁵ and J. B. Tavernier (1644).⁶ Cartwright was the first to communicate a number of measurements and figures for the size of Nineveh. On the basis of his own observation of the remains of the city walls he arrived at the following result: "... it was built with foure sides, but not equall or square; for the two longer sides had each of them (as we ghesse) an hundred and fiftie furlongs; the two shorter sides, ninetie furlongs, which amounteth to foure hundred and eightie furlongs of ground, which makes threescore miles, accounting eight furlongs to an Italian mile. The walls whereof were an hundred foot upright, and had such a breadth, as three Chariots might passe on the rampire in Front: these walls were garnished with a thousand and five hundred Towers".⁷ And as far as I know, Tavernier was the first to describe the mound of ruins known as Nabî Yûnus.

The clear recognition of the position of Nineveh was, however,

¹ *Beschreibung der Reysz Leonhardi Rauwolffen* ... (1582), p. 244.

² *Thesaurus geographicus* (1596).

³ *Sir Anthony Sherley, his Relation of his Travels in Persia* ... (1613).

⁴ *The Preachers Travels* ... (1611).

⁵ *Viaggi di Pietro della Valle ... descritti ... in 34. Lettere famliari ... all'erudito ... Mario Schipano, divisi in tre parti, cioè La Turchia, La Persia e l'India* ... I 1650, II 1658, III 1663.

⁶ *Les six voyages de J.-B. Tavernier* ... (1676).

⁷ Cited from *Hakluytus Posthumus or Purchas his Pilgrimes* ... II (1625), p. 1435.

called in question by Jean Otter,¹ who was staying at Mosul in 1743; he identified Nineveh with Eski-Mosul, a ruin on the western side of the Tigris like Mosul, but considerably higher up the river. Otter, however, only gained one adherent, D. Sestini,² who in 1781, with Basrah as his objective, travelled through the region around Mosul. The question as to the position of Nineveh was finally settled by the Dane Carsten Niebuhr,³ who in March 1766 on his way home from Bombay by way of Persepolis made a stay at Mosul. Niebuhr states very positively that the mounds he visited near the Tigris and opposite the city of Mosul were the ruins of Nineveh.⁴ And as the first traveller in the Near East he gave his contemporaries some idea of Nineveh, partly, by a sketch, of Mosul and the ruins in bird's eye view,⁵ partly of the large southern mound of Nabî Yûnus.⁶ Later publications of travellers who had visited Mosul (e. g. E. Ives ³/₇ 1758,⁷ G. A. Olivier 1793⁸) do not add anything new, and in 1779 one of France's most famous geographers, Jean Bourguignon d'Anville could establish as a fact that Nineveh had been situated opposite to the city of Mosul: "On sait que la rive opposée, ou la gauche du fleuve, conserve des vestiges de Ninive, et que la tradition sur la prédication de Jonas n'y est point oubliée."⁹

§ 4. Unlike the rediscovery of Nineveh, that of Babylon was a matter of great difficulty. Though it was not until about 500 years after the fall of Nineveh that Babylon became a desolate heap of ruins, there existed no local tradition about the position of the city which could be of aid to travellers or scholars.¹⁰ Those who had only their own observation to guide them, were naturally induced by the gigantic ruin of 'Aḡar Ḳûf, about 10 miles west of Baghdad, and by the

¹ *Voyage en Turquie et en Perse* ... (1748).

² *Viaggio da Costantinopoli a Bassora* ... (1786).

³ *Reisebeschreibung nach Arabien und andern umliegenden Ländern* (II, 1778).

⁴ *Ibid.* II, pp. 353 f.

⁵ *Ibid.* II, Tab. XLVI.

⁶ *Ibid.* II, Tab. XLVII b.

⁷ *A Voyage from England to India, in the Year 1754* ... also a *Journey from Persia to England* ... (1773).

⁸ *Voyage dans l'empire ottoman, l'Égypte et la Perse* ... (II, 1804).

⁹ *L'Euphrate et le Tigre* (1779), p. 88.

¹⁰ Several of the travellers to Babylon named below have been mentioned under Nineveh in § 3, to which the reader is referred concerning their printed publications.

lofty ruins of Birs Nimrūd southwest of Hillah, to conjecture that in one of these places they were faced with the remains of the tower of the Marduk temple of Babylon or the Tower of Babel, as it is called in early books of travel.

(1) 'Aḳar Kūf = the Tower of Babel, and as a consequence of this, the site of Babylon, was identified with that of Baghdad: Nicolo di Conti (1428–53),¹ L. Rauwolff (1574), Gasparo Balbi (1579–80)² John Eldred (1583),³ Abraham Ortelius, *Thesaurus geographicus* (1596), A. Sherley (1599), J. Cartwright (1601), Th. Herbert,⁴ J. B. Tavernier (1644).

(2) Birs Nimrūd = the Tower Babel: Benjamin of Tudela (12th cent.),⁵ Vincenzo Maria di S. Caterina da Siena (1657).⁶

The first to point out the real site of ancient Babylon in the vicinity of Hillah was Pietro della Valle,⁷ who visited Bâbil, the northernmost mound of the ruins of Babylon, in the year 1616 (letters of the ¹⁰/₁₂ and ²³/₁₂ 1616, see I 1650). The great traveller describes Bâhil as a huge rectangular tower or pyramid with its corners pointing to the four cardinal points, and identifies the remains of this building with the Tower of Babel. We do not know when Emmanuel de Saint Albert (Emmanuel Ballyet 1700–1773) visited the Hillah district, but a manuscript account of his travels was submitted to the Duke of Orleans prior to 1755,⁸ while in addition he had described his expedition to

¹ *Viaggio di Nicolo di Conti Venetiano scritto per Messer Poggio Fiorentino*, see *Primo volume delle Navigazioni et Viaggi* ... [A cura di G. B. Ramusio]. (Venetia 1550), pp. 365–71.

² *Viaggio dell'Indie Orientali* ... (1590).

³ *The Voyage of M. John Eldred to Trypolis in Syria ... and from thence ... to Babylon and Balsara. 1583*, see R. Hakluyt, *The Principal Navigations* ... II (1599), pp. 268–71.

⁴ *A Relation of some yeares traaille, begunne Anno 1626. Into Afrique and the greater Asia* ... (1634).

⁵ Rabbi P'ethahlah, who also travelled in Mesopotamia in the 12th century (see p. 41 note 2), states that he has visited Babylon's ruins and seen Nebuchadnezzar's palace, but as he does not localise any of these places we are no better off than before.

⁶ *Il Viaggio all'Indie Orientali* ... (1672); Vincenzo Maria visited Hillah on the 10.9. 1657 without realising the importance of the place.

⁷ See p. 42 note 5.

⁸ Cf. J. B. d'Anville, *Mémoire sur la position de Babylone* (*Mémoires de l'Acad. des Inscr. et Belles-Lettres* XXV111, 1761), p. 256: "Le P. Emmanuel de St. Albert, Carme déchaussé et vicaire Apostolique à Bagdad, dans une relation manuscrite de son voyage au Levant, que je dois à feu Mgr. le duc d'Orléans, parle pour avoir été sur le lieu (l. e. Babylon)"; d'Anville's *Mémoire* ... was delivered as a lecture as early as the 25.1.1755 at the Académie des Inscriptions et Belles-Lettres.

Babylonia in a letter to Pope Benedict XIV in 1754.¹ Emmanuel de Saint Albert paid a visit both to Bâbil and Birs Nimrûd and was of opinion that the former mound was the more likely to be the remnants of the Tower of Babel. His account of the ruins at Hillah, together with Pietro della Valle's description, forms the foundation on which J. B. d'Anville in 1761² based his indication of the position of ancient Babylon in the Hillah district.³ Prior to d'Anville's publication Jean Otter in 1748,⁴ perhaps under the influence of Pietro della Valle, and referring to the Arab geographer Yâqût, had located the ancient city of Babylon near Hillah, while at the same time he mentions a local tradition to the effect that 'Aḡar Ḳûf was the burial place for the kings of the country.

The Dane Carsten Niebuhr, who with the Danish "Arabian Expedition" departed from Copenhagen on the 7th January 1761, cannot have known d'Anville's publication, but during his stay in the Hillah district in December 1765 he, with his usual acumen and clear-sightedness, identified the part which the natives called *ard Bâbil* (the soil or land of Babylon) as the site of ancient Babylon: "Dass *Babylon* in der Gegend von Helle gelegen habe, daran ist gar kein Zweifel. Denn nicht nur die Einwohner nennen diese Gegend noch bis auf den heutigen Tag *Ard Babel*, sondern man findet hier auch noch Überbleibsel von einer alten Stadt."⁵ Niebuhr further pointed out the large ruin heaps close by the eastern bank of the river as the probable site of the castle of Babylon and the hanging gardens. The results at which J. de Beauchamp (1784) and C. J. Rich (1811, 1817) were later to arrive in their studies on the site of ruined Babylon are based on the authority of d'Anville and Niebuhr.

It should be mentioned, however, that Carsten Niebuhr was the originator of an erroneous assumption. We have seen above that two travellers identified Birs Nimrûd with the Tower of Babel (p. 44); Niebuhr, who describes the place as follows: "Hier ist ein ganzer Hügel von den erwähnten schönen Mauersteinen, und oben auf dem-

¹ Cf. L. G. Michaud, *Biographie universelle* ... Nouv. éd. II (1843), s. v. Ballyet.

² *Mémoire sur la position de Babylone* (1761), pp. 255 ff.

³ *Ibid.* p. 246 shows, on a map of the area south of Baghdad, Babylon north of Hillah, divided into two parts by the Euphrates, called "Ædes reglæ" and "Templum Belli".

⁴ See above, p. 43 note 1.

⁵ *Reisebeschreibung nach Arabien* ... II (1778), pp. 287-88, cp. the fact that on Tab. XL1 Babylon's ruins are placed north of Hillah.

selben steht ein Thurm'',¹ regards the building as the remnants of Herodotus' temple of Belus. And since he rediscovered Babylon in the Hillah district, Birs Nimrūd must thus have been lying within the precincts of ancient Babylon. This idea of a Greater Babylon, including what we now know was the neighbouring city of Borsippa, was adopted and elaborated in the 19th century by C. J. Rich, whose particular point of view we shall discuss below, by J. S. Buckingham (1816),² who even included the Al Uḫaimir (Kish) ruins, by R. Ker Porter (1818),³ who excludes Kish from the Greater Babylon area, by Robert Mignan (1827),⁴ who agreed with Buckingham, and in 1852 by the French *Expédition scientifique et artistique de Mésopotamie et de Médie*⁵ under the leadership of Fulgence Fresnel.

§ 5. It is a matter of course that detailed descriptions by travellers and scholars of the ruins of Nineveh and Babylon, the finding of inscriptions on the site, and attempts at actual excavations, were of a very limited kind. And yet they form the foundation and inspiration for what was started in the year 1842 in the shape of systematic excavations, which have been continued to this day, 114 years later, with unflagging diligence. The period of investigation before 1842 was especially hampered by the fact that the writing and language of the inscriptions were not understood, and that the topographical foundation consisted of scattered information in classical authors.

(1) Nineveh: J. Cartwright's explorations and measurements and Carsten Niebuhr's sketches of the ruins and of Nabī Yūnus were mentioned above. J. Macdonald Kinneir, who was attached to General Malcolm's mission to the Persian Court, visited Mosul in 1810, accompanied by Captain Edward Frederick of the Royal Navy; two years previously they had together investigated the ruins at Hillah. As a result of this, Kinneir some years later published a brief account of the mounds near Mosul,⁶ while Edward Frederick gave a special

¹ *Ibid.* II (1778), p. 289.

² *Travels in Mesopotamia ...* (1827).

³ *Travels in Georgia, Persia, Armenia, Ancient Babylonia ...* (1821-22).

⁴ *Travels in Chaldæa ...* (1829).

⁵ J. Oppert, *Expédition scientifique en Mésopotamie ...* (1859-63).

⁶ *A Geographical Memoir of the Persian Empire ...* (1813), pp. 258-59; "the wall is, on the average, twenty feet in height", and dealing with the mound of Kuyunjik he says: "forming an oblong square not exceeding four miles in compass"; on the relation of his visit to Hillah, cf. *ibid.* pp. 272-82.

description of the ruins of Babylon.¹ On the 31st October, 1820, the English Resident of the East India Company at Baghdad, Claudius James Rich (1787–1821), arrived at Mosul with Carl Bellino (see pp. 80 f.), his secretary, then mortally ill, and spent four months there. The experience he had gained through his work among the ruins of Babylon, to be dealt with below, enabled him to furnish an admirable contribution to the topography of Nineveh,² a contribution which was to become of fundamental importance for the great excavation expeditions after 1842. When in 1852 Felix Jones³ prepared a survey and a plan of Nineveh, it was merely a supplement to Rich's investigations he produced; he says about Rich: "His survey (of Nineveh) will be found as correct as the most diligent enthusiast can desire." Rich visited and sketched with plans every one of the great mounds which must be assumed to have constituted part of ancient Nineveh. The first of the mounds he explored was that known among the natives as Nabî Yûnus, because it was supposed to contain the tomb of the prophet Jonah; here he ascertained that a merely cursory examination by means of the spade would uncover inscriptions written in cuneiform characters, and obtained from the natives the famous Sennacherib cylinder.⁴ Subsequently Rich transferred his investigations to Kuyunjik and drafted a plan of it, went down the river and studied the mound of Nimrûd (March 1821).⁵ In each of the villages visited by Rich, he found cuneiform inscriptions; those which could be easily transported he bought for his collection,⁶ but many were of a monumental charac-

¹ *Account of the present compared with the ancient state of Babylon* (Transactions of the Bombay Society 1813, pp. 120–139).

² *Narrative of a Residence in Koordistan, and on the Site of Ancient Nineveh* (1836), published posthumously by his widow; cf. also Rich's letter dated 5.12.1820 to Silvestre de Sacy, published in *Journal des Savants*, avril 1822, pp. 237–41.

³ *Topography of Nineveh* (JRAS XV (1855), pp. 297–397, with six magnificently executed maps), and *Notes on the Topography of Nineveh* (Selections from the Records of the Bombay Government, New Series No. XLIII (1857), pp. 435 ff.; *Memoirs by Commander James Felix Jones*).

⁴ BM 22502, the so-called Bellino Cylinder, as Carl Bellino made a copy of the inscription, which Rich sent to Grotefend, who published it in *Abh. d. K. Ges. d. Wiss. zu Göttingen* (1850); republished by A. H. Layard, *Inscriptions in the Cuneiform Character* ... (1851), pls. 63–64.

⁵ C. J. Rich, *Narrative of a Residence in Koordistan* ... (1836), II, p. 130 gives a facsimile of writing from Nimrûd.

⁶ In this was also included a large number of oriental manuscripts (c. 800, for details see H. V. Hilprecht, *The Excavations in Assyria and Babylonia* (1904), p. 351), which

ter, being cut into stones which the Arabs had used for the erection of their miserable hovels.

(2) Babylon: Pietro della Valle, who also visited Persepolis and from there, as we shall learn, brought to the knowledge of European scholars the first examples of cuneiform script, was the first European "excavator" in Mesopotamia. In § 4 mention is made of his visit, in 1616, to Bâbil, which he described as the most wonderful thing he had ever seen; he had an artist make a sketch of the mound, on which he found inscribed bricks, and some of these he brought back with him to Rome. Other such bricks he brought home from his stay in 1625 at Muqayyar, Ur of the Chaldees (letter of Aug. 5, 1625, see III 1663); some of the bricks he had collected he presented to Athanasius Kircher, who later wrote a learned account of the Tower of Babel.¹ These bricks were sundried, and this appeared to Pietro della Valle so peculiar that he dug at several places into the mass with pickaxes to make sure of his first impression. During this "excavation" he ascertained that in places which served as supports these bricks were baked, though they were of the same size as the others. Emmanuel de Saint Albert, mentioned in § 4, also collected inscribed bricks on Bâbil some time in the first half of the 18th century: "Les caractères que le P. Emmanuel dit, dans sa relation, être imprimés sur les briques qui restent de bâtisses aussi anciennes que peuvent être celles de Babylone, seroient pour les Savans qui veulent pénétrer dans l'antiquité la plus reculée une matière toute nouvelle de méditation et d'étude".²

On July 6th, 1781, Joseph de Beauchamp left Marseille with the object of making astronomical observations at Baghdad; prior to 1786 he had visited Hilla twice: "... j'ai passé deux fois à Hella, lieu de l'ancienne Babylone, et ... je suis allé visiter les ruines ou plutôt les montagnes de briques qui se trouvent encore actuellement."³ The results of these two visits, the first of which took place in 1784,⁴ were recorded by Beauchamp 1790 after his return to Paris;⁵ on Bâbil, were catalogued in *Fundgruben des Orients* III-IV (1813-14), where also (III, 1813) Rich published a translation of the Arabic legend: *The Story of the Seven Sleepers*.

¹ *Turris Babel* ... (1679).

² J. B. d'Anville, *Mémoire sur la position de Babylone* (1761), p. 259.

³ Letter of the 20.10.1786 to Maréchal de Castries, publ. by V. Schell, *RA X* (1913), pp. 11 f.

⁴ *Journal des Sçavans*, mai 1785, pp. 852 ff.

⁵ *Mémoire sur les Antiquités babyloniennes qui se trouve aux environs de Bagdad* (*Journal des Sçavans*, décembre 1790, pp. 797-806), reprinted by V. Schell, *RA X* (1913), pp. 185-193.

which he often, using the name employed by the Arabs, calls Makloubé or Makloubet,¹ "se trouvent ces briques larges et épaisses empreintes d'une écriture inconnue dont j'ai apporté des échantillons à M. l'Abbé Barthelemy."² But his most important investigations took place on Qasr, to which Niebuhr (see § 4) had previously called attention: "Ces ruines s'étendent à plusieurs lieues au nord de Hella, et décèlent incontestablement, la situation de l'ancienne Babylone. J'ai fait travailler pendant 3 heures deux hommes pour déterrer un bloc qu'ils croyaient une idole." In this excavation, the first in Mesopotamia for which paid native workmen under the leadership of a "maître Mâçon" from Hillah were purposely employed, the object was the great stone sculpture known as the Lion of Babylon, which the natives had found in 1776. Furthermore, Beauchamp described parts of the Ishtar gate, which he takes to be the wall of a palace chamber: "Le même Mâçon m'a dit avoir trouvé une chambre sur un mur de laquelle il y avait une vache formée avec des briques vernies, et l'image du soleil et de la lune, on y trouve quelquefois des idôles d'argile représentant des figures humaines; j'y ai trouvé moi-même une brique sur laquelle était un lion, et sur d'autres une demi-lune en relief." Beauchamp finally mentions the finding of solid cylinders covered with very small writing: "outre les briques écrites d'ont j'ai parlé, il se trouve des cylindres massifs de 3 pouces de diamètre, d'une matière blanche, chargés d'une écriture très-menue, ressemblante aux inscriptions de Persepolis que Chardin³ a rapportées."

In the letter of Oct. 20th, 1786, quoted above on p. 48³ unpublished until 1913, Beauchamp likewise mentions the similarity to the Persepolitan inscriptions published by Chardin; whether he was uninfluenced by J. J. Barthélemy on this point must remain an open question,⁴ but already in 1762 the latter had declared concerning the cuneiform

¹ Or rather *Muqaillba*, popularly pronounced *Mujéllba*; this term also in Beauchamp often includes Qasr: "cet endroit (i. e. Qasr) et la montagne de Babel (i. e. Bâbil) sont vulgairement appelés par les Arabes, Makloubé."

² Jean Jacques Barthélemy (1716-1795), the founder of Phœnician and Aramaic epigraphy; his observations on the cuneiform writing will be discussed below.

³ Cf. *Voyages de Monsieur le Chevalier Chardin en Perse et autres lieux de l'Orient* III (1711), p. 118.

⁴ In a note on Beauchamp's letter to Maréchal de Castries (see p. 48 note 3) Barthélemy (see *RA* X (1913), p. 12) merely mentions Beauchamp's correct observation: "Ces caractères sont certainement les mêmes que ceux de Persépolis, ainsi que M. Beauchamp l'a reconnu."

inscription on the Caylus Vase: "Les caractères en sont les mêmes que ceux de Persépolis."¹ Beauchamp's activities on Qasr were hampered to some extent by the natives, "qui ne voyent jamais volontiers les Européens fouiller les terrains qu'ils occupent", a remark the truth of which the great expeditions after 1842 were also to experience, both in relation to the natives and to the Turkish administration. "Mais il faudrait payer la cupidité des Musulmans", says Beauchamp. The inscribed bricks brought home by him to Paris as well as his travelling account from 1790,² which contains amongst other things the first accurate description of the giant ruin of El Tak-Kesré (i. e. Ctesiphon) south of Baghdad, were translated into English and German³ and created a great sensation among scholars, especially in England, as we shall see below.

There is no doubt that Beauchamp's description of the site with the ruins of Babylon and the inscriptions found there must be designated as the portal leading to the wide field of Assyriology, for a systematic collection of inscriptions followed in the wake of his report of 1790. But precisely because a subsequent description of ancient Babylon was of such a negative character, added initiative was required, viz. that of C. J. Rich, before the actual hour of the birth of Assyriology came. In 1793 the famous French naturalist Guillaume Antoine Olivier visited the Hillah region, and he reports that it was quite useless to try to ascertain which were the actual ruins of ancient Babylon: "Le sol sur lequel elle (i. e. Babylon) fut assise . . . ne présente, au premier aspect, aucune trace de ville: il faut le parcourir en entier pour remarquer quelques huttes, quelques légères élévations, pour voir que la terre a été presque partout remuée. Là, des Arahes sont occupés, depuis plus de douze siècles, à fouiller la terre et retirer les briques, dont ils ont bâti en grande partie Cufa, Bagdad . . . Hellé, et presque toutes les villes qui se trouvent dans ces contrées."⁴ Beauchamp also

¹ Comte de Caylus, *Recueil d'antiquités égyptiennes, étrusques, grecques et romaines* V (1762), p. 82. The text is written by Caylus, who quotes Barthélemy's words after a comparative examination of the inscription on the Caylus Vase and the Persepolitan inscriptions of *Voyages de Cornette le Brun par la Moscovie, en Perse, et aux Indes Orientales* II (1718), p. 273.

² *Journal des Sçavans*, décembre 1790, pp. 797-806.

³ English translation in *European Magazine* XXI (1792), pp. 338-42, German version in S. S. Witte, *Vertheidigung des Versuchs über den Ursprung der Pyramiden in Egypten und der Ruinen von Persepolis . . .* (1792), pp. 251-273.

⁴ *Voyage dans l'empire ottoman, l'Égypte et la Perse . . .* II (1804), p. 436.

mentioned that the Arabs made "excavations" to procure building bricks: "faire les fouilles pour en tirer les briques", and in the description of the ruin heaps of the Mosul region quoted above, the same hunt for bricks is mentioned (pp. 47-48), a deplorable fact, which was to place many obstacles in the way of future excavation expeditions.

C. J. Rich paid his first visit, lasting for about 10 days, to Babylon in December 1811. During this short time he made a more thorough examination of the ruins of Babylon than any one had till then made, and while mapping the whole area of ruins from Bâbil to Qumquma, popularly pronounced Jumjuma, he made Captain Abraham Lockett¹ draw a plan of it according to his instructions. In addition, he employed ten workmen to make regular excavations on Mujêliba (Bâbil) in order to investigate the underground cavities which appeared among the ruins, collected inscribed bricks, contracts, a Nebuchadnezzar cylinder, a fragment of a *kudurru*, and cylinder seals. The publication of his results, comprising the plan of the site of the ruins of Babylon, accompanied by twelve sketches of ruins (4 of Mujêliba (Bâbil), 4 of Birs Nimrûd, 3 of Qasr, and a general view seen from the Euphrates) and copies of the collected material of inscriptions,² marks the hour when Assyriology saw the light. In 1817, in company with Bellino, he paid another visit to Babylon and carefully rechecked his theories and topography;³ these results of his exhaust all possibilities of inference without excavation on a grand scale. In his own generation his two publications caused a great sensation among scholars as well as laymen; an echo is traceable in Byron's *Don Juan* V 62 (1821).

But actually it was Robert Ker Porter's interesting drawings⁴ which opened the door to ancient Mesopotamia to the general cultured public in England and on the Continent. Ker Porter had already achieved fame

¹ Notable members of the British Residency in Baghdad were, besides C. J. Rich and his wife Mary Rich, the physician Dr. John Hine, Captain Abraham Lockett, who had the military command, and from 29.6.1815 Carl Bellino, who in Trieste was chosen to be secretary to Rich during the latter's journey in Europe. Rich accompanied by Bellino was back again in Baghdad on the 16.3.1816.

² *Memoir on the Ruins of Babylon*, published in *Fundgruben des Orients (Mines de l'Orient)*, hrsg. v. Joseph von Hammer, III (Wien 1813), pp. 129-162, 197-200; republished by James Mackintosh, London 1815, ²1816, ³1818.

³ *Second Memoir on Babylon* ... London 1818. The two *Memoirs* were reprinted and edited by his widow with the title: *Narrative of a Journey to the Site of Babylon in 1811* ... *Second Memoir on the Ruins* ... London 1839.

⁴ *Travels in Georgia, Persia, Armenta, Ancient Babylonia* ... (1821-22).

in England when on October 14th, 1818, he arrived at Baghdad, where he was well received by Rich, who let his secretary Bellino accompany him to Babylon, Birs Nimrûd, Al Uḫaimir (Kish), and 'Aḫar Kūf. Ker Porter had previously visited Persepolis and by copying inscriptions rendered great services to cuneiform research. In Mesopotamia, his contribution mainly consists in the accurate reproductions, from an artist's point of view, of the then famous ruins of antiquity before any excavation by European investigators had taken place. But, he also furnished a plan of the whole area of the ruins of Babylon, and he was the first to form a correct conception of the use and general occurrence of the Mesopotamian temple tower, the ziggurat: "I should suppose the mass we now see to be no more than the base of some loftier superstructure, probably designed for the double use of a temple and an observatory; a style of sacred edifice common with the Chaldeans, and likely to form the principal object in every city and town devoted to the idolatry of Belus and the worship of the stars."

C. J. Rich's excellent mapping of Babylon and his estimation of the secular as well as the sacred buildings of the individual areas at the time of Nebuchadnezzar were met with critical arguments from James Rennell,¹ after the death of Joseph Banks (1820) the acknowledged head of British geographers. In Rich's *Second Memoir on Babylon* (1818), in which Rennell's treatise was reprinted, we can follow their opposed views. The most essential difference was that at his first visit Rich had received a profound and lasting impression of the gigantic ruin of Birs Nimrûd: "The morning was at first stormy, and threatened a severe fall of rain; but as we approached the object of our journey, the heavy clouds separating, [we] discovered the Birs frowning over the plain and presenting the appearance of a circular hill, crowned by a tower, with a high ridge extending along the foot of it. Its being entirely concealed from our view, during the first part of our ride, prevented our acquiring the gradual idea, in general so prejudicial to effect, and so particularly lamented by those who visit the Pyramids. Just as we were within the proper distance, it burst at once upon our sight, in the midst of rolling masses of thick black clouds partially obscured by that kind of haze whose indistinctness is one great cause of sublimity, whilst a few strong catches of stormy light, thrown upon

¹ *Remarks on the Topography of Ancient Babylon* ... (1816), also published in *Archæologia* XVIII (1817), pp. 243-62, read 14.12 and 21.12.1815.

the desert in the background, served to give some idea of the immense extent and dreary solitude of the wastes in which this venerable ruin stands."¹ To Rich, Birs Nimrūd therefore was, and continued to be, the Tower of Babel, an idea which he maintained in spite of its inconsistency with all the topographical evidence concerning Babylon set forth by himself. James Rennell, however, localised the Tower of Belus to the mound of Bâbil.

In this view he was later supported by Robert Mignan;² the latter left Basrah at the end of October, 1827, and partly walking partly riding in a native *hurrâda* on the river, was the first after Pietro della Valle to explore the interior of southern Babylonia. Theoretically Mignan rejects the idea that Birs Nimrūd may be the Tower of Belus, since all classical authors agree in placing this in the middle of the town, but at the same time he attempts in practice, through actual excavations on Qasr, to get a clue to the topography of the place. In these excavations, the first and last after those of Rich in 1811 before the beginning of the great excavations in 1842, Mignan employed no less than 30 workmen to clear away the rubbish along the western face of a large pilaster. In this way an area of 12 sq. feet to a depth of 20 feet was removed, revealing a well preserved platform consisting of inscribed bricks c. 20 sq. inches in size. The finds from Mignan's excavations constituted four cylinder seals, three engraved gems, several copper and silver coins, one of which dated from the time of Alexander the Great. On the east side of Qasr, near a well preserved wall of an unexplored passage, he found an inscribed barrel cylinder in situ, the first one excavated by a European. In connection with Mignan's finds it should be mentioned that in 1824 George Thomas Keppel, Lord Albemarle,³ on his return journey from Persia not far from Seleucia noticed a statue⁴ which according to the description resembled the Gudea statues that later, after 1877, were to come to light during de Sarze's excavations at Telloh.

As a consequence of C. J. Rich's pioneer investigations (see above pp. 47 f., 51) the ruins of Nineveh and Babylon attracted the whole

¹ *Narrative of a Journey to the Site of Babylon in 1811* ... (1839), p. 74.

² *Travels in Chaldæa, including a Journey from Bussorah to Bagdad, Hillah and Babylon, performed on foot in 1827* ... (1829).

³ *Personal Narrative of Travels in Babylonia, Assyria, Media and Selythia* ... (1827).

⁴ "Il est vraisemblable que c'est la statue no. 98065 aujourd'hui au British Museum" (A. Parrot, *Archéologie mésopotamienne* I (1946), p. 29.)

interest of investigators at the dawn of Mesopotamian archaeology. But in conclusion it should be mentioned that in the period from Robert Mignan's excavations at Qasr (1827) till the first spadeful of earth was dug up on Kuyunjik (December 1842), several other *tulûl* in Mesopotamia, representing ancient ruins, were observed by interested travellers, and their references to them proved to be of great importance in the future, as they prepared the way for later regular excavations in the places observed. Following in Mignan's steps, and employing a similar simple mode of travelling as he did (see above p. 53), J. Baillie Fraser¹ within the period December 24th, 1834–January 22nd, 1835, explored the interior of southern Babylonia in company with Dr. John Ross of the Baghdad Residency, visiting i. a. Warka (Uruk), Senkereh (Larsa), Jôkha (Umma), Muqayyar (Ur), and Tell Şifr (Kutalla). In the period March 16th to October 28th, 1836, the Euphrates and the Tigris were navigated by the so-called British Euphrates Expedition under the leadership of Colonel Fr. R. Chesney. As the Suez Canal was not yet in existence, England examined the possibilities of a shorter way of communication with India from the Mediterranean across the present Syria and via the rivers Euphrates or Tigris to the Persian Gulf. The difficulties of navigation in connection with Russia's protest to the Porte, and the exhausted funds of the expedition resulted in the abandonment of the aim of the expedition as well as the whole scheme itself. From the accounts published by William F. Ainsworth,² surgeon and geologist to the expedition, and a passionate archaeologist, it appears that like Baillie Fraser he had observed Warka, Senkereh, Jôkha, Muqayyar, and Tell Şifr, and that in 1838 he visited Ka'at Sharkât (Assur) for the first time. Rich had passed this later so important field of excavation in a *kelek* down the Tigris on March 6th, 1821, but without being able to land; it was, no doubt, observed more closely for the first time by John Ross³ in 1836 on his way to Hatrah; on April 20th, 1840, Ainsworth revisited the imposing site of the ruins in company with Christian Rassam and two

¹ *Travels in Koordistan, Mesopotamia, etc. . . .* II (1840), pp. 1–165.

² *Notes of an excursion to Ka'ah Sherkat, the Ur of the Persians, and to the ruins of Al-Hadr, the Hulra of the Chaldees, and Hatra of the Romans (JRGS XI (1841), pp. 1–20);* cp. also *A Personal Narrative of the Euphrates Expedition* (1888).

³ *Notes on two journeys from Baghdad to the ruins of Al-Hadr in Mesopotamia in 1836 and 1837 (JRGS IX (1839), pp. 443–70).*

young travellers, Edward Ledwich Mitford¹ and Austen Henry Layard, who in 1839 had left England for India, and had arrived at Mosul on April 10th, 1840. On his journey from Mosul to Baghdad, Layard passed the ruins of Nimrûd, which Rich visited in March, 1821 (see above p. 47), like Rich sailing down the Tigris in a small *kelek*. Layard says: "It was evening as we approached the spot. The spring rains had clothed the mound with the richest verdure, and the fertile meadows, which stretched around it, were covered with flowers of every hue."² The sight of Nimrûd's ruined ziggurat with its conical peak burnt itself into his mind; he and Mitford reached Hamadân on their onward journey, and Layard was able to study the cuneiform inscriptions at Bihistûn. But on the 8th August, 1840, the two friends parted company at Hamadân, Mitford to go to India, Layard, stimulated by the sight of the Bihistûn inscription, to return westward to the region around Mosul, whose ruins had entirely captivated him: "These huge mounds of Assyria made a deeper impression upon me, gave rise to more serious thoughts and more earnest reflection, than the temples of Balbec, and the theatres of Ionia."³

§ 6. However, real insight into the ancient Assyro-Babylonian cultures could only be gained by systematic excavations of the ruins in connection with a knowledge of the characters and the language of the inscriptions. This knowledge is inseparably associated with the history of the Persepolitan inscriptions in scientific research. In the reign of Shah Abbas I (1587-1629), when Ispahan became the seat of the government, Persia experienced a brilliant period of ascendancy which made European courts try to establish commercial relations with the government of the country through their merchants and ambassadors. And by the latter, knowledge of ancient Persian remains and antiquities was carried to European learned circles. Already before that time the Venetian ambassador Giosafat Barbaro (1472)⁴ had with admiration mentioned the magnificent ruins of Takht-i-

¹ *A Land March from England to Ceylon forty years ago ...* (1884).

² *Nineveh and its Remains ...* I³ (1849), p. 7.

³ *Ibid.* p. 7.

⁴ His itinerary was published by Antonio Manuzio in 1543 in a collection of itineraries to the Middle East with the title: *Viaggi fatti da Vinetia, alla Tana, in Persia, in India ...* (Vinegia, Aldus, 1543), pp. 24-64; *Viaggio dello istesso Messer Iosaphat Barbaro in Persia.*

Jamshīd¹ 40 miles northeast of Shirāz, besides the bas-reliefs at Naqsh-i-Rustam, situated 3 miles farther off, and the ruins at Murghāb (Pasargadae) 30 miles to the northeast.

Antonio de Gouvea (1602),² the first ambassador of Philip III of Spain and Portugal to the court of Abbas I, gives an indifferent and rather confused description of Takht-i-Jamshīd, but he was the first to notice the writing which he saw in many places at Takht-i-Jamshīd; he ascertained that it was unlike that of the Persians, Arabs, Armenians, and Jews. The succeeding Spanish ambassador, Don Garcia Silva Figveroa (1617)³ was the first to identify the ruins of Takht-i-Jamshīd with Darius' palace of Persepolis, i. a. drawing on the description of it by Diodorus Siculus XVII 70-72. As to the writing of the inscriptions, he states that he had never seen the like of it; it was unlike the Chaldaean, Hebrew, Arabic, and Greek writing, it was triangular but long, of the form of a pyramid or a little obelisk, so the characters did not differ in any respect from each other but in their placing and situation. Of the actual area of the ruins Don Garcia gives a detailed description, and he had an artist make drawings on the spot, amongst others of a complete line of an inscription, but none of these were published.

It was Pietro della Valle, who in a letter dated the 21st October, 1621, took a survey of the Persepolis ruins, striking out a new path for the rest of the century; and in the same letter⁴ he for the first time confronted European scholars with the Persepolitan writing through an inaccurate copy of five characters, which afterwards proved to be part of the Achaemenian royal title, the "King of kings". Pietro della Valle states that these characters are those which occur most frequently in the Persepolitan inscriptions, and adds that he thinks that they should be read "dalla sinistra alla destra al modo nostro". In a letter dated the 5th August, 1625,⁵ he describes the characters on the in-

¹ For centuries known in the neighbourhood as Čehil-Minār, "Forty Minarels (or Pillars)", this name being found in various versions with the first observers on the site, e. g. Cilminar (Barbaro), Chelminira (Gouvea), Chlilminara (Don Garcia), Chilminar (*Philosophical Transactions* 1666), Chahelminar (Flower), Chlilminar (Bruin.) Tschil minār (Niebuhr).

² *Relaçam em que se tratam as guerras e grandes victorias que alcançou o grãde Rey da Persia Xá Abbás do grão Turco Mahomello, e seu filho Amethe ...* (Lisboa 1611).

³ *De rebus Persarum Epistola V. Kal. an. M.DC.XIX. Spahanī exarata ad Marchionem Bedmarli ...* (Antverplae 1620).

⁴ *Vlaggi di Pietro della Valle ...* II, (1658). p. 286.

⁵ *Ibid.* III (1663).

scribed bricks collected by him at Muqayyar in southern Babylonia (see above p. 48) in words recalling Don Garcia's description of those from Persepolis: unknown characters, which seem to be very old, and in appearance resembling lying pyramids. But he does not correlate the Babylonian with the Persepolitan characters, possibly because one of the Babylonian characters, which he describes as a star with eight rays of light, is not known from Persepolis.

Before Pietro della Valle's Persepolitan observations were published in 1658, Thomas Herbert (1626-27),¹ who was in the service of Sir Dodmore Cotton, the British ambassador in Persia, had appended to the record of his travels published in 1634 (as also to the 2nd edition 1638) an engraving of the ruins, which is the first general view ever taken of Persepolis in modern times. But this drawing is amazingly incorrect, and the same applies to the new drawing of the ruins, engraved by Holler, which Herbert published in his travelling report, 3rd edition, 1665, after studying Pietro della Valle and conferring with one Mr. Skinner, who had recently returned from Persia. But the engraving published by Joh. Albr. v. Mandelslo² which was to illustrate his description of Persepolis, is not satisfactory, either.

Of the inscriptions, which, as well as the monuments, according to Herbert were fast approaching annihilation owing to the natives' destruction and theft, he gives the following description: "very faire and apparent to the eye, but so mysticall, so odly framed, as no Hieroglyphick, no other deep conceit can be more difficultly fancied, more adverse to the intellect. These consisting of Figures, obelisk, triangular, and pyramidall, yet in such Simmetry and order as cannot well be called barbarous. Some resemblance, I thought some words had of the Antick Greek, shadowing out *Ahashuerus Theos*. And though it have small concordance with the Hebrew, Greek or Latine letter, yet questionlesse to the Invention it was well knowne."³ Here the writing of the inscriptions is compared with known alphabets, especially

¹ *A Relation of some yeares travell, begunne 1626. into Africke and the greater Asia, especially the Territories of the Persian Monarchie ...* (1634); ²1638 (Dutch transl. 1658, French transl. 1663), ³1665, ⁴1677.

² A member of the embassy sent by Frederik III, Duke of Gottorp, to Persia; his *Morgenländische Reyse-Beschreibung ...* (Schlesw. 1658) was published by the secretary to the embassy Adam Olearius, who did not visit Persepolis himself.

³ *Some yeares Travels into Divers Parts of Asia and Africke ...* Revised and enlarged ... (1638), pp. 145-46.

the Greek, a comparison which in the 18th century was extended to comprise such diverse kinds of writing as the Chinese (E. Kaempfer 1712,¹ C. G. von Murr 1777,² R. E. Raspe 1791,³) the Ogham script of Ireland (A. Court de Gébeline,⁴) the Egyptian hieroglyphs (A. C. Ph. Comte de Caylus 1762.⁵) J. A. Mandelslo, however, refrained from every comparison, but was the first to make the correct observation, later confirmed by Daulier-Deslandes, that the inscriptions had originally either been inlaid or decorated with gold: "... an etlichen Marmeln Taffeln waren seltzame Charactern oder Schriftt eingegraben, die niemand lesen kan, die Buchstaben gehen fast alle oben spitz zu, und stehen auff breiten Füßen, es scheint, als wenn sie mit Golde eingelegt gewesen wären."⁶

The first fairly accurate engraving of the palaces of Persepolis was published in 1673 by André Daulier-Deslandes, a young French artist who accompanied J. B. Tavernier on his sixth journey to Persia, visiting Persepolis in company with M. Thévenot in May, 1665. However, the apparently copied inscription⁷ in the engraving is no accurate copy, but only gives three of the Persepolitan characters in varying positions, probably to convey an impression of the decorative effect of this writing. That Daulier-Deslandes' engraving, which according to him represented a temple, not a palace, though published on too small a scale to allow actual details to be seen, aroused great interest, is seen i. a. from the fact that it was reproduced without permission in a German folio edition of Pietro della Valle's travels.⁸ Moreover Daulier-Deslandes' book on Persia was much read at the end of the 17th century and contributed largely to stimulate the interest in the antiquity of that country. And it is reasonable to assume that his "inscription" with its greatly decorative effect is responsible for the theory, put forward in the 18th century, that the inscriptions expressed

¹ *Amoenitates exoticae* ... (1712), p. 331.

² *Journal zur Kunstgeschichte* ... IV (1777), p. 137.

³ *A descriptive catalogue of a general collection of ancient and modern engraved gems* ... (1791).

⁴ *Monde primitif* ... III (1775), p. 506.

⁵ *Recueil d'antiquités égyptiennes* ... V (1762), pp. 79 f.

⁶ *Morgenländische Reyse-Beschreibung* ... (1658), p. 14.

⁷ *Les beautés de la Perse* ... par le Sieur A. D. D. V[endômois] ... (1673), p. 60, Pl. I₂.

⁸ Gentil 1674, III p. 130; another reprint is seen in G. F. Gemelli-Careri, *Giro del mondo* II (1699), p. 260.

no meaning at all, but merely served decorative purposes (Th. Hyde 1700, 1760;¹ F. B. Tandeau 1762;² S. S. Witte 1789;³ 1792;⁴ 1799.⁵)

Probably prompted by the descriptions published by Don Garcia in 1620, Herbert in 1638, and Pietro della Valle in 1658, the British Royal Society in 1666 issued a series of inquiries relative to the antiquities of various countries; one of these (Persia. 3.) runs as follows: "Whether, there being already good Descriptions in Words of the Excellent Pictures and Basse Relieves, that are about *Persepolis* at *Chimilnar*, yet none very particuler; some may not be found sufficiently skill'd, in those parts, that might be engaged to make a Draught of the Place, and the Stories there pictured and carved?"⁶ There were two results of this query, and both of them contributed to our knowledge of the "Stories there pictured and carved" mentioned by the Royal Society. In 1666 our knowledge of these was restricted to the five characters published by Pietro della Valle in 1658, and from what the travellers had said about the inscriptions, everybody was aware that these five characters did not represent an inscription in its entirety.

In the fourth improved and enlarged edition of his travelling account of 1677,⁷ Sir Thomas Herbert (1606–82) advanced some new views concerning the Persepolitan writing, and in conclusion gives an apparently three-lined inscription. It was mentioned above (p. 57) that at the age of twenty Herbert visited Persia in company with the British ambassador, and that he published an account of the journey, which appeared in several editions (see p. 57¹). After 1627 he did not visit Persia; he was a member of Parliament at the outbreak of the Civil War; was taken into the household of Charles I, to whom he became much attached; was latterly his only attendant; and was with him on the scaffold. At the Restoration he was made a baronet. But why did not Herbert publish the three-line inscription in the first three editions (1634, 1638, 1665) of his travelling account, in which, especially in the 2nd edition (see above p. 57), the Persepolitan writing is discussed?

¹ *Historia religionis veterum Persarum* ... (1700, ²1760).

² *Dissertation sur l'écriture hiéroglyphique* (1762).

³ *Ueber den Ursprung der Pyramiden in Egypten und der Ruinen von Persepolis* (1789).

⁴ *Vertheidigung des Versuchs über den Ursprung der Pyramiden* ... (1792).

⁵ *Über die Bildung der Schriftsprache und den Ursprung d. keilförmig. Inschriften zu Persepolis* (1799).

⁶ *Philosophical Transactions* 1. For Anno 1665, and 1666, p. 420.

⁷ *Some Years Travels into Divers Parts of Africa and Asia the Great* ... (1677), pp. 142 f.

It is a most peculiar problem which confronts us here; considering the interest evinced by European scholars in Persepolis and its inscriptions, ever since the appearance of Gouuea's travel account (1611), it seems strange that fifty years elapsed before Herbert found the three-line inscription from 1627 among his notes. The above-cited request of the Royal Society of 1666 must have induced Herbert to re-examine his material of notes. That it is his own copy from 1627, is beyond doubt, for it bears no resemblance to Daulier-Deslandes' "inscription" from 1673 or Pietro della Valle's five characters from 1658, the only two previously published reproductions of Persepolitan characters.

It is interesting, and certainly compels admiration, that the quite young Herbert, with Don Garcia's report in an English translation¹ as his only aid to any knowledge of the Persepolis inscriptions, as early as 1627 made a copy, but unfortunately the copy is not particularly good, and it is not a three-line inscription, but the first two lines are derived from one, the third line from another of Naqsh-i-Rustam's inscriptions. Considered and understood as a separate inscription, it could thus only confuse the learned investigators of the new writing, and moreover the partially incorrect rendering of the characters made it useless. Herbert's three lines were reprinted without permission as a two-line inscription by G. F. Gemelli-Careri,² who in 1694 visited Persia on his journey around the world from June 13, 1693–December 3, 1699. As regards Persepolis, he copied Pietro della Valle, Herbert, and Daulier-Deslandes, whose engraving of the ruins he "borrowed" (see p. 58^b) as also Herbert's inscription. But Gemelli-Careri's book was favourite reading in the 18th century and contributed greatly to keep alive the interest in Persepolis and its inscriptions.

As regards Herbert's considerations concerning the Persepolitan script we note in the 1677-publication a different view from that put forward in 1638 (see p. 57); after a comparison with twelve other alphabets, he says about the Persian characters: "I could not perceive that these had the least resemblance or coherence with any of them: which is very strange." Herbert is of opinion that the prophet Daniel, who probably instructed the architect of the palace and supervised its erection, was able to read the inscriptions: "they bear the resemblance

¹ See *Hakluytus Posthumus* or [Samuel] Purchas his *Pilgrimages*. In five bookes ... II (1625), pp. 1533–34.

² *Giro del mondo* II (1699), p. 260, Fig. 1.

of pyramids inverted or with bases upwards, Triangles or Delta's or (if I may so compare them) with the Lamed in the *Samaritan* Alphabet, which is writ the contrary way to the same letter in the *Chaldee* and *Hebrew*"; of his former idea of a resemblance to Greek he is now silent. Perhaps he merely adopts the view held by Pietro della Valle when he says: "... by the posture and tendency of some of the Characters (which consist of several magnitudes) it may be supposed that this writing was rather from the left hand to the right, as the *Armenian* and *Indian* do at this day." But in his characterisation of the writing he is entirely independent, in a way prophetic, if we consider the Assyro-Babylonian ideograms and his term brachyography, even though the Persian script is alphabetic-syllabic: "The Characters are of a strange and unusual shape; neither like Letters nor Hieroglyphicks; yea so far from our deciphering them that we could not so much as make any positive judgment whether they were words or Characters; albeit I rather incline to the first, and that they comprehended words or syllables, as in Brachyography or Shortwriting we familiarly practise."¹

The other result of the request of the Royal Society was due to an agent of the East India Company, Samuel Flower. In November 1667 he copied Sassanian, Greek, and Arabic inscriptions at Nocturestand, i. e. Naqsh-i-Rustam, and then continued by copying the Chahelminar (Persepolis) inscriptions. Unfortunately Flower died in Syria before publishing his results; this was done, though only in part, in the *Philosophical Transactions* in 1693² by a friend of his, Francis Ashton, who added an informative letter. From this it appears that Flower complied with the request of the Royal Society and "spent a great deal of Time and Money" on taking copies of the monuments in Naqsh-i-Rustam and Persepolis. But his sudden death "left his Draughts and Papers dispersed in several hands, one part whereof you have here, the rest its hoped may in some time be recovered, if Sir John Chardin's exact and accurate Publication of the entire Work do not put a period to all further Curiosity . . ." It is not clear to what Ashton refers when he

¹ *Some Years Travels . . .* (1677), pp. 141 f.

² *Philosophical Transactions*. For the year 1693. Vol. XVII (1694), Numb. 201, June 1693, pp. 775-76: A Letter from Mr. F. A. Esq; R. S. S. to the Publisher, with a Paper of Mr. S. Flowers containing the Exact Draughts of several unknown Characters, taken from the Ruines of Persepolis; pp. 776-77: An Exact Draught or Copy of several Characters engraven in Marble at the Mountains of Nocturestand and Chahelminar in Persia as they were taken in November 1667. By Mr. S. Flower.

mentions Chardin's publication; we know that Chardin visited Persepolis (and Naqsh-i-Rustam) in 1666, 1667, and 1674, that is to say in one of these years simultaneously with Flower, but his brilliant work, *Voyages en Perse et autres lieux de l'Orient*, with its twenty-three magnificent copper plates made of Persepolis from the drawings of G. J. Grélot, was not published until 1711, 18 years after Ashton's letter to the *Philosophical Transactions*. In 1793 A. I. Silvestre de Sacy¹ suggested that Flower's "inscription" from 1693 was due to Chardin, from whom Flower had "borrowed" it, but Ashton's words seem rather to indicate that Flower's copies of the Persepolis inscriptions had been included in Chardin's great work. However, the question can hardly be definitely settled, it only seems certain that Flower copied considerably more of the Persepolis inscriptions than the "inscription" of two lines which was published by Ashton in 1693.

Accompanying Ashton's letter was a lithographed plate of inscriptions, the fifth of which consists of two lines comprising in all 23 characters. Flower's explanatory note on these two lines runs as follows: "This Character, whether it be the ancient writing of the *Gaures* or *Gabres*, or a kind of *Telesmes* is found only at *Persepolis*, being a part of what is there engraven in white Marble, and is by no Man in *Persia* legible or understood at this day. A learned Jesuit Father, who deceased three years since, affirmed this Character to be known and used in *Ægypt*."² Ashton as well as several investigators in the 18th and 19th centuries³ regarded Flower's two lines as a genuine copied inscription, which caused much confusion to the early decipherers of the cuneiform writing, and often put an obstacle, under the name of the "Tarku

¹ *Mémoires sur diverses antiquités de la Perse* ... (1793), p. 25.

² Cf. above, p. 58. the theory about the Egyptian origin of the inscriptions of Persepolis.

³ Flower's "inscription" was reprinted by Thomas Hyde in *Historia religionis veterum Persarum* (1700), p. 516 Tab. XIV; (1760), p. 547 Tab. XIV, from which probably Nicolaes Witsen, *Noord en Oost Tartarye* ... II (1705), p. 563, reproduced it. Witsen, however, is responsible for the localisation of Flower's two lines to the neighbourhood of Derbent and Tarku (Tarki), and by strange devious ways, about which see further R. W. Rogers, *A History of Babylonia and Assyria* I (1915), pp. 102 ff., Flower's "inscription" appears in the 19th century as the "Tarku inscription", which was tentatively deciphered by E. Burnouf in *Mémoire sur deux inscriptions cunéiformes* ... (1836) and by A. Holtzmann in *Beiträge zur Erklärung der persischen Keilinschriften* (1845) and in *ZDMG* VI (1852); a text edition was even published by E. Burnouf, *ibid.* Pl. V and in *J. As.* 3. sér., t. IX (1840), Pl. VII, where J. Ménant published it together with the cuneiform inscriptions from Van copied in 1827 by Fr. É. Schulz († 1829).

inscription", in the way of their further investigations. But Flower was in no doubt that he had recorded 23 different isolated characters from the Persepolis inscriptions; this appears from the fact that he put a full stop after each of them. The significance of these full stops could not perhaps be appreciated in 1693, but after the Persepolis inscriptions published by J. Chardin, E. Kaempfer, and C. de Bruin in 1711, 1712, and 1714, respectively, in which the individual characters were not separated by full stops, all discussion of Flower's "inscription" should have given way to a realisation of the fact that there were here 23 single distinct signs. It was not until 1820 that G. F. Grotefend established this, when he said that Flower's "inscription" "ein Gemisch von Zeichen aus allen drey Keilschriftarten zu Persepolis enthält".¹ But even if E. F. F. Beer gave his support to this view, the attempts at deciphering the hapless "inscription" did not stop (see p. 62³), and only Henry Rawlinson's famous publications of 1846(-47) and 1851 put an end to all talk of the "Tarku inscription".

The Persepolitan script was named in the year 1700 by Thomas Hyde,² who, discussing Flower's "inscription", which he reproduced (see p. 62³), designated its characters as "dactuli pyramidales seu cuneiformes";³ however, Hyde did not think that the characters formed a script, but that they merely served purely decorative purposes (see p. 59). From 1711 onward, when Jean Chardin's magnificent work was published, till the beginning of the 19th century the Persepolitan inscriptions were indeed still the centre of research, but their history and publication proceeded on parallel lines with those of the Assyro-Babylonian inscriptions, the Persian inscriptions being written in three languages (Old Persian, Susian, Babylonian). The credit for the dawning recognition of this is due partly to Jean Jacques Barthélemy (1716-95), who as early as 1762 noted the similarity between the cuneiform writing of the Caylus Vase and the Persepolitan script, partly to J. de Beauchamp, who in 1786 identified the writing on

¹ *Allgemeine Literatur-Zeitung vom Jahre 1820*, 1 (Halle 1820), p. 845.

² Erroneously Engelbert Kaempfer is stated to be the originator of the name of the Persian script (see B. T. A. Evetts, *New Light on the Bible* ... (1892), p. 76; A. J. Booth, *The Discovery and Decipherment of the Trilingual Cuneiform Inscriptions* (1902), p. 70; Ch. Fossey, *Manuel d'Assyriologie* ... I (1904), p. 88; E. A. Wallis Budge, *The Rise and Progress of Assyriology* (1925), pp. 12, 20). It is true that Kaempfer called the characters of Persepolis "cuneatae" in his *Amoenitates exoticae*, but this work was published in 1712, twelve years later than Hyde's *Historia religionis veterum Persarum* (1700).

³ *Historia religionis veterum Persarum* ... (1700), p. 526; ¶(1760), p. 556.

inscribed bricks from Hillah near ancient Babylon with the Persian script (see above pp. 49 f.). Through the first-mentioned observation the language and writing of the Babylonian culture first entered the scene of research. As far back as 1778, when Carsten Niebuhr's travel book was published, this born epigrapher had ascertained that the Persepolitan inscriptions were written in three different alphabets,¹ which he divided into the classes or groups I, II, and III without drawing the conclusion that the three classes were repetitions of the same text in different languages, whereas Barthélemy's above-mentioned observation was to become of the greatest importance in the history of the decipherment.

In Section 8 below, in which we shall try to give a chronological list of the publication of Assyro-Babylonian inscriptions up to P. É. Botta's *Monument de Ninive, Tome III-IV: Inscriptions* (1849), the Persian cuneiform inscriptions will often come into the list as trilingual. As a result of the researches mentioned in this section we can, from the 17th century, draw up the following list of published Persepolitan inscriptions, or rather of individual signs from these, all in one language, Old Persian, with the exception of that of Flower:

1658 Pietro della Valle.

[1673 André Daulier-Deslandes (reprints: Pietro della Valle, Genff 1674; G. F. Gemelli-Careri 1699)].

1677 Thomas Herbert (reprint: G. F. Gemelli-Careri 1699).

1693 Samuel Flower (reprints: Th. Hyde 1700, ²1760; N. Witsen 1705; E. Burnouf 1836; Fr. É. Schulz-J. Ménant 1840).

§ 7. After travelling in the greater part of Turkey, Persia, and India, Pietro della Valle, having been absent for 12 years, returned to Rome in the year 1626, bringing with him a large collection of curiosities from his travels. Among these were building bricks, some of them with inscriptions, collected in the Hillah area (Bâbil) and from Muqayyar (see above, § 5), the first Babylonian antiquities and inscriptions brought to Europe, where they caused no very great sensation. After 1626, inscribed bricks, cylinder seals, (with or without inscriptions) and other Assyro-Babylonian antiquities (e.g. the Caylus Vase, Caillou Michaux) were occasionally brought home to private or

¹ *Reisebeschreibung nach Arabien . . .* II (1778), p. 153.

public European galleries, as a result of those activities of travellers or researchers in the 18th century which were mentioned in § 5. As regards the inscriptions the material must be supplemented by the published copies of the monuments in situ, derived mainly from the region around Persepolis in western Persia.

At the present date it is impossible to provide a complete list of the museums and private collections possessing Babylonian antiquities and inscriptions in the period from 1626 until the arrival at the close of the forties of the last century in the Louvre and the British Museum of P. É. Botta's and A. H. Layard's invaluable finds from the excavations at Khorsabad and Nimrūd, respectively. The following list, founded on knowledge drawn from publications of Babylonian antiquities, is not arranged chronologically, since this is impossible, but regionally.

I. Italy.

Pietro della Valle, Rome.

Athanasius Kircher, Rome (see above p. 48): Museo Kircheriano, 1876 incorporated in the Museo Etnografico-Preistorico (Collegio Romano).

The Grand Duke of Florence, Florence.

Cardinal Borgia, Velletri.

II. Holland.

Cornelis de Bruin's Collection, Amsterdam.¹

III. France.

Musée du Louvre, Paris (e.g. Beauchamp's collections, cf. also § 8 No. 19). L'Assemblée nationale, in the month of May 1791, ordered "la création d'un musée au palais du Louvre", and on the 27th July 1793 the name Musée de la République was adopted, the old Cabinet du Roi forming the foundation of the museum; in the Napoleonic period its name was the Musée impériale.

¹ Whether such a collection exists and, if so, where in Amsterdam, I cannot say but can only refer the reader to A. J. Booth, *Discovery and Decipherment* ... (1902), pp. 73-74: "Le Bruyn appears to have been one of the first travellers to attempt to make a collection of these antiquities to send home to Europe. The extreme hardness of the stone severely taxed the strength of his tools, and it was with considerable difficulty that he secured a piece from a window [at Persepolis] covered with cuneiform characters, and some other smaller objects. These he despatched through the agent of the Dutch East India Company to the Burgomaster of Amsterdam."

Bibliothèque nationale (1804–15: B. impériale), Cabinet des antiquités (now the Cabinet des médailles), Paris (e.g. Caillou Michaux).

A. C. Ph. de Tubières-Grimoard de Pestels de Levis, Comte de Caylus, Paris (the Caylus Vase, cylinder seals).

Abbé Joseph de Beauchamp, Paris.

Abbé Ch. Ph. Campion de Tersan, Paris: Museum Tersantianum or Museum Abbatis Tersani, see Cl. M. Grivaud de la Vincelle, *Catalogue des objets d'antiquité et de curiosité qui composait le cabinet de feu M. l'abbé Campion de Tersan* (1819).

M. Raymond, Paris.

M. Rousseau, Paris.¹

Baron Louis François Sébastien de Fauvel, Paris (i. a. a Babylonian cylinder seal found on the battle-field of Marathon, Greece, discussed without results by G. F. Grotefend 1820, see § 8 No. 30).

Victorien Pierre Lottin de Laval, Paris.

IV. England.

British Museum, London (e.g. C. J. Rich's collections bought on the 3rd May, 1825, for £ 7000²). The B.M. was founded in 1753, opened in 1759.

Library of Trinity College, Cambridge (1808 presented by Sir John Malcolm: Neri-glissar No. 1, see VAB IV (1912), first published in I R 67, 1861).

The East India Company, London. Founded in 1600. The company's residents in Baghdad (later British consular and political agents in Turkish Arabia) in the eventful years 1807–55 were C. J. Rich (1807–21), Colonel J. Taylor (1821–43), H. C. Rawlinson (1843–55). As a result of Beauchamp's travel account of 1790 (see above p. 48), in which his epoch-making observations and finds from ancient Babylon were mentioned, the following letter, dated 18.10.1797, was sent by the East India Company, London, to the Governor of Bombay: "Being always desirous to lend their assistance to those who may be employed in the elucidation of Oriental antiquities, and being informed that near the town of Hillah,

¹ Cf. A. Parrot, *Bibliotheca Orientalis* XII 5–6 (1955), p. 187.

² Cf. Constance M. Alexander, *Baghdad in Bygone Days* . . . (1928), p. 324.

on the River Euphrates, there exist the remains of a very large and magnificent city, supposed to be Babylon; and that the bricks of which those ruins are composed, are remarkable for containing on an intended scroll or label, apparently a distich, in characters totally different from any now made use of in the East". Therefore the East India Company have decided to direct the Governor of Bombay "to give orders to the resident at Bassorah to procure from thence ten or a dozen of the bricks, and to transmit them, carefully packed up, as early as possible to Bombay, that they might be thence forwarded to them in one of their ships sailing for England".¹ The company's Resident at Baghdad about 1800 [Sir] Harford Jones [Brydges] made a collection of Babylonian inscriptions which reached London in 1801 and was published by J. Hager (inscribed bricks) and Th. Fisher (Nebuchadnezzar II's "Black Stone" inscription, Neb. No. 15, see VAB IV (1912)).

Sir William Ouseley, London.

Sir R. Ker Porter, London.

Mr. Charles Town(e)ley, London.

Mr. Salt, London (?).

George Gordon-Hamilton, Fourth Earl of Aberdeen (Esarhad-don's Black Stone inscription from Nineveh (see I R 49), presented to BM (No. 91027) in 1860).

Mr. Hamilton (a baked Babylonian building brick received from Lord Aberdeen, see G. F. Grotefend, *Allgem. Liter.-Zeit.* (Halle 1819), II p. 144).

Mr. B. Hertz, London, see *Catalogue of the Collection of Assyrian, Babylonian, Egyptian . . . Peruvian and Mexican Antiquities formed by B. Hertz* (1851), in which 16 Babylonian cylinder seals are mentioned (pp. 1-2); compare also the sale catalogue of the collection from 1859, Nos. 395-412.

[The casts of sculptures, reliefs, and inscriptions from Persepolis in the possession of Sir Gore Ouseley² and George Gordon-Hamilton, Lord Aberdeen, the former presented to

¹ B. T. A. Evetts, *New Light on the Bible . . .* (1892), p. 106.

² *The Asiatic Journal and Monthly Register for British India . . .* II (1816), p. 384: "Sir Gore Ouseley has brought home and placed upon the staircase of his house, in Bruton-Street, several of the sculptured marbles of Persepolis amongst which are inscriptions in the arrow-headed character, and in the highest state of preservation."

the British Museum by the Rt. Hon. Mountstuart Elphinstone¹ (Governor of Bombay 1819–27), do not concern us here or elsewhere since they have played no part in the history of decipherment.]

V. The Austro-Hungarian Monarchy.

K. K. Antiken-Cabinet, Vienna.

Count Wenceslaus Rzewusky, Vienna.

J. von Hammer-Purgstall, Vienna.

Archduke Johann, Johanneum, Graz (Grätz).

(e.g. cylinder
seals, gifts from
C. J. Rich)

VI. Germany.

Museum Praunianum, Nürnberg (cylinder seals).

Hrr. Usko, Senator in Danzig (building brick from Babylon, see Fr. Münter, *Det kgl. danske Videnskabers- Selskabs Skriver for Aar 1800* (1801), p. 509 (misprint for: 309) and Grotefend, *Gött. gelehrte Anz.* 1819, p. 1951).

W. Dorow, Wiesbaden (later Bonn) (cylinder seals).

Königl. Museum, Berlin, later Vorderasiatisches Museum, Berlin (the so-called Sargon Stele from Larnaka (Kition) in Cyprus found in the autumn of 1845 by L. Ross, was shortly afterwards acquired by the Berlin Museum, first published in III R 11, 1870).

VII. Denmark.

University Library, Copenhagen: two unbaked building bricks from the time of Nebuchadnezzar II with inscriptions; the 7-line inscription was presented 1820 by N. Wallich, Calcutta (see § 8, No. 32), the other (6 lines), also from Babylon, by Rasmus Rask in 1823. Both were transferred 1869–70 to Antik-Cabinetet, Copenhagen (founded in 1851), which in 1892 was incorporated in Nationalmuseet, Copenhagen.

VIII. Dr. Mitchill, New York (received in January 1817 from Captain Henry Austin a 6-line inscription from the district around Basrah.²)

IX. The Catholic Armenian Vicar General of the Bishopric of Ispahan, Ispahan: Inscription Neb. No. 9, see VAB IV (1912), later in the possession of Sir Thomas Phillips, Bart., Middle-

¹ *Synopsis of the Contents of the British Museum*, 29. ed. (1835), p. 190.

² Carl Bezold, *Kurzgefasstes Überblick über die babylonisch-assyrische Literatur ...* (1886), p. 132.

hill, first published from a Bellino copy (see below § 8 No. 45) by G. F. Grotefend 1850, and in I R 65-66, 1861).

X. Dr. John Hine, Baghdad (cylinder seal).

Dr. Ross, Baghdad (inscription accompanied by the impression of cylinder seals, afterwards in the possession of Mr. Steuart (see below p. 84), according to Layard, *Nineveh* . . . II (1849), p. 187).

Captain Abraham Lockett, Baghdad (later Calcutta) (cylinder seals and building bricks, cf. § 8 Nos. 25 and 32).

Colonel J. Taylor, Baghdad (see Budge, *By Nile and Tigris* (1920), p. 26). He succeeded C. J. Rich at Baghdad (see above p. 66) until H. C. Rawlinson took over his office in 1843. He is not identical with the vice-consul at Basrah J. E. Taylor, i.a. known from the excavations at Muqayyar (Ur), despite L.W. King's statement, *CT XXVI* (1909), p. 8: "... which was found at Nebi Yunus by Col. J. E. Taylor in 1830, and some twenty-five years later was acquired by the British Museum." We are here concerned with the finding of the famous Taylor Cylinder, the large six-sided prism inscription which A. H. Layard mentions as being in the possession of Colonel Taylor, whom he calls: "late political Agent at Baghdad" (*Nineveh and its Remains*¹ . . . II (1849), p. 186), cp. *Discoveries in the Ruins of Nineveh and Babylon* . . . (1853), pp. 139² and 345: "the late Colonel Taylor"; from which it would seem that in 1853 the latter was dead. The history of the Sennacherib inscription is confused and obscure owing to the contradictory statements of our authorities. Since L.W. King incorrectly mentions J. E. Taylor as the finder, his date, 1830, has no foundation, but it is supported by J. Oppert;³ Layard, on the pages quoted above, mentions Nabî Yûnus as the probable finding place. In 1860 J. Ménant³ states that in 1846 Colonel Taylor sent the prism inscription to England but "il fut égaré pendant la traversée, et M. Lottin de Laval³ fut alors (i.e. in the year

¹ *Expédition scientifique en Mésopotamie* . . . I (1863), pp. 86 f., 305.

² *Les écritures cunéiformes* . . . (1860), p. 165.

³ In 1857 Victorien Pierre Lottin de Laval published a book concerning a new method of taking casts, i. a. of monuments of antiquity: *Manuel complet de lottinoplastique, l'art*

1860) le seul possesseur d'un moule qu'il avait pris sur l'original". Ménant's statement in the year 1860 does not agree well with that of L.W. King about the British Museum acquiring the prism inscription about the year 1855. Ménant, one of the leading Assyriologists of the time, could not, or should not, have been unaware of such an acquisition. The essential fact, however, was that this invaluable document came into the possession of the British Museum and that it was published in I R 37-42 (1861, re-edited in *CT* XXVI, 1909).

§ 8. In the lines that follow we shall attempt to give a chronologically arranged list of publications of Assyro-Babylonian inscriptions up to the time when the great epigraphical publications from Khorsabad (Botta 1849), Nimrūd (Layard 1851), and Bihistūn appeared (Babylonian text, Rawlinson 1851). The rather impressive list, comprising 46 numbers, begins with Samuel Flower's two-line "inscription" from 1693 (see above pp. 61 ff.) and ends with G. F. Grotefend's publication in 1850 of Bellino's copy of the Sennacherib cylinder.

1. 1693: *Philosophical Transactions*. For the year 1693. Vol. XVII (London 1694), pp. 776-77. Samuel Flower's "inscription" (made in 1667, see pp. 61-63), i.e. two lines containing 23 different cuneiform characters, obviously selected at random from the Persepolitan inscriptions and, as mentioned above, not a coherent single inscription copied by Flower. The characters have been copied from the three different Persepolitan types of writing which Niebuhr in 1778 termed classes I, II, and III (see p. 64), and about which it was realised, in the period after 1851, that they expressed three different languages: Old Persian, Susian (or Elamite), and Babylonian, in which all the Achaemenian inscriptions were written. Flower's two lines contain 8 Old Persian, 4 Susian, and 11 Assyro-Babylonian characters, numbers 4, 7-9, 11, 13, 15-17, 19, and 22 being Assyrian *u*, *bu*, *ša*, *ši*, *rad*, *i*, *a*, *u*, *nu*, *ha*, and *ia*. These are the first published examples of the Assyro-Babylonian script, and the signs are excellently reproduced. [Reprints: Thomas Hyde, *Historia religionis veterum Persarum* . . . (1700), p. 516 Tab. XIV; ²(1760), p. 547 Tab. XIV; Nicolaes Witsen,

du moulage de la sculpture en bas-relief . . .; his cast of the Taylor Cylinder has never been published and is only known from Ménant's mention of it.

Noord en Oost Tartarye . . . II (1705), p. 563; as the "Tarku inscription" (see p. 62³) E. Burnouf, *Mémoire sur deux inscriptions cunéiformes* . . . (1836), Pl. V; Fr. É. Schulz (- J. Ménant), *J. As.* 3. sér., t. IX (1840), Pl. VII].

2. 1711: *Voyages de Monsieur le Chevalier Chardin en Perse, et autres lieux de l'Orient*, Tome III (Amst. 1711), p. 118 Pl. LXIX, gives the first copy of a complete inscription from Persepolis in three languages; it is repeated 18 times on the window frames of the inner hall of the palace of Darius in Persepolis. Jean Chardin, who was born at Paris in 1643, and visited Persepolis in 1666, 1667, and 1674, became a naturalised Englishman in 1681. The first edition of his travel book entitled *Journal du voyage du Chevalier Chardin en Perse et aux Indes Orientales* . . . (Londres 1686) contains only the voyage from Paris to Ispahan; the account of the travels of Chardin was first published in full, Amst. 1711, and in two sizes: 3 volumes in quarto (the above-cited edition) and 10 volumes in octavo. The above-mentioned 3-line inscription (one line in each of the three languages) was copied both by Engelbert Kaempfer (1686) and published in his *Amoenitates exoticæ* . . . Lemgoviae 1712, p. 347, and by Cornelis de Bruin (1704), who published it in *Reizen over Moskovie, door Persie en Indie* . . . t'Amsterdam 1714, pp. 217-18 No. 134. Accurate copies of Darius' trilingual window-frame inscription were first given by William Ouseley (1811), who took part in his brother's, Sir Gore Ouseley's embassy to Persia, and were published in his *Travels in various countries of the East, more particularly Persia* . . . II (London 1821), Pl. XLI, and by N. L. Westergaard, *Mémoires de la Société royale des Antiquaires du Nord 1840-44* . . . Copenhagen s. d. [1845¹], Tab. XVI c: L (only the Babylonian version).²

3. 1712: Engelbertus Kaempferus, *Amoenitates exoticæ* . . . Lemgoviae 1712, p. 333, has a 24-line Babylonian inscription in one language, copied in 1686, from the southern outer wall of the main terrace of Persepolis, by far the longest cuneiform inscription that had

¹ See *Mémoires de la Société royale des Antiquaires du Nord 1845-49* . . . p. 118.

² Since this list of Assyro-Babylonian inscriptions, which also includes the trilingual Persian Achaemenian inscriptions, is only carried down to 1850 (see p. 70), we have not cited the exact copies of Darius' and Xerxes' Persepolis inscriptions published by Charles Texler, in his *Descriptions de l'Arménie, la Perse et la Mésopotamie* (1842-52) and by Eugène Flandin et Pascal Coste, *Voyage en Perse pendant les années 1840 et 1841* . . . (1843-54).

ever yet been published. Though the copy is useless as only some of the signs are correctly reproduced, Kaempfer's copy, as a first attempt upon so large a seal, deserves the highest commendation. Accurate copies of the inscription were published by Carsten Niebuhr in *Reisebeschreibung nach Arabien . . . II* (Kopenhagen 1778), pp. 152–153, Tab. XXXI: Inscription L, and by Sir Robert Ker Porter in *Travels in Georgia, Persia, Armenia, Ancient Babylonia . . . I* (London 1821), Pls. 55–56.

4. 1714: Cornelis de Bruin, *Reizen over Moskovie, door Persie en Indie . . .* t'Amsteldam 1714, pp. 217–18 Nos. 131, 132, reproduces three trilingual inscriptions from Persepolis (later known as Niebuhr B, D, C), in addition to No. 134: Chardin and Kaempfer's trilingual window-frame inscription, as already mentioned (see No. 2). C. de Bruin, who in the French translations bears the name Corneille Le Bruyn or Le Brun (Lebrun), is a more accurate copyist than are Chardin and Kaempfer, and for his time the copies he made some time between $\frac{9}{11}$ 1704– $\frac{23}{1}$ 1705¹ are wonderfully good, although he confuses many of the letters by too great compression. Accurate copies were published by C. Niebuhr, Tab. XXIV. [Reprint: *Uebersetzung der Allgemeinen Welthistorie die in Engelland durch eine Gesellschaft von Gelehrten ausgefertigt worden . . . Genau durchgesehen . . . von Siegmund Jacob Baumgarten*, IV (Halle 1746), p. 99, Taf. IV: de Bruin Nos. 132 and 134, but not the longest trilingual one, No. 131. *Algemeine Welthistorie* appeared in the period 1744–1814, a later editor was J. S. Semler. The English original (1736–65 Fol., later edition 1779–84) and the French translation (1742–92, 1802, later ed. in 126 vols., 1779–91) do not reproduce C. de Bruin's copies of the inscriptions.]

5. 1752: Anne Claude Philippe de Tubières-Grimoard de Pestels de Levis, Comte de Caylus, *Recueil d'antiquités égyptiennes, étrusques, grecques et romaines I* (Paris 1752) pp. 54ff. Pl. XVIII reproduces two Babylonian cylinder seals with inscriptions. The copy, the signs of which have an archaic stamp of ancient Babylonian character, is useless. The two seals, which form part of Comte de Caylus' private collection, are stated to have been found in Egypt, but are regarded as Persian on account of the style of the figures; the characters are

¹ Cf. A. A. Kampman, *Jaarbericht . . . Ex Oriente lux* Nr. 12 (1951–52), p. 159.

called "hiéroglyphes" and are said to "diffèrent trop des caractères tracés dans les ruines de Persepolis".

6. 1762: Comte de Caylus, *Recueil d'antiquités* . . . V (Paris 1762), pp. 79 ff. Pl. XXX gives a quadrilingual inscription on an alabaster vase found in Egypt, two lines of a Persian trilingual inscription containing Xerxes' name translated into Egyptian hieroglyphics. The copy is passable. Concerning the characters on the vase which are not hieroglyphics, Abbé J. J. Barthélemy, after a comparison with C. de Bruin's copies, declares (see p. 50¹) by the mouth of Comte de Caylus p. 82: "Les caractères en sont les mêmes que ceux de Persépolis" (see p. 50.) Independent copies were published by A. J. Saint-Martin, *Extrait d'un mémoire relatif aux antiques inscriptions de Persépolis lu à l'Académie des Inscriptions et Belles Lettres* [in 1822], Pl. II (*J. As.* 11 (1823), pp. 65-90); G. F. Grotfend, *Neue Beiträge zur Erläuterung der persepolitischen Keilschrift* . . . (1837), Taf. II 3 (after a poor copy sent anonymously). [Reprints: Christoph Gottlieb von Murr, *Journal zur Kunstgeschichte und zur allgemeinen Litteratur* IV (1777), Tab. III; Charles Bellino, *Account of the Progress made in Deciphering Cuneiform Inscriptions* (*Transactions of the Literary Society of Bombay* II (1820), pp. 170-192: Pl. No. 4)].

7. 1777: Christoph Gottlieb von Murr, *Journal zur Kunstgeschichte und zur allgemeinen Litteratur* IV (1777), Tab. I C reproduces "E Museo Prauniano Norimb." (see p. 68) two cylinder seals, one of which bears an inscription; useless because only a few of the characters are correctly copied.

8. 1778: Carsten Niebuhr, *Reisebeschreibung nach Arabien und andern umliegenden Ländern* II (Kopenhagen 1778), pp. 132 ff. Tab. XXIII (list of signs), XXIV: Inscriptions A-G, XXXI: Inscriptions H-L admirably reproduce three trilingual Persepolitan inscriptions: 1° B, D, C; 2° G, F, E; 3° H = J, K, L, where C, E, and L are the Babylonian versions, in addition to a unilingual Old Persian Xerxes inscription (A); ep. below No. 43. Niebuhr, whose accurate copies formed the firm foundation for all study and all attempts at decipherment of the Persepolis inscriptions, established the fact that these were written and should be read from left to right, divided the three types of writing into classes I, II, and III, and found that class I, the ancient Persian script, only employed 42 signs in all, which he copied out and set in order in one of his plates (Tab. XXIII). [Reprints: C. G. von

Murr, *Journal zur Kunstgeschichte* . . . IV (1777) Tab. I B: Niebuhr F;¹ S. Fr. G. Wahl, *Geschichte der morgenländischen Sprachen und Litteratur* . . . (1784), Tab. IV A, B, C: Niebuhr G, E, F; it should further be mentioned that G. F. Grotefend in his numerous publications from 1805² and onwards not only uses the Niebuhr copies in his attempts at decipherment but also often reprints some of them].

9. 1791: R. E. Raspe,³ *A descriptive catalogue of a general collection of ancient and modern engraved gems, cameos, as well as intaglios, taken from the most celebrated cabinets in Europe, and cast in coloured pastes, white enamel, and sulphur by James Tassie II* (London 1791), Pls. IX Nos. 651–52, IX₂ Nos. 15099–15102 and XI No. 653, depict two Babylonian cylinder seals and a cameo on which is seen a helmeted warrior; all the three objects have inscriptions, Nos. 651–52 two lines, Nos.

¹ Communicated to Murr by Niebuhr in a letter dated 2.4.1776.

² G. F. Grotefend's decipherment of the Old Persian royal names: *Praevia de euneatis quas vocant Inscriptionibus persepolitans legendis et explicandis relatio* was presented by a friend to the Göttingen Academy on 4.9.1802 but was not published by the Academy, any more than other papers presented on 2.10.1802, 13.11.1802, and 20.5.1803. A review of *Praevia de euneatis* . . . was given by Th. Chr. Tychsen in *Göttingische gelehrte Anzeigen*, 18.9.1802, 149. Stück, pp. 1481–87, and by A. I. Silvestre de Sacy, *Lettre à M. Millin sur les Monumens persépolitains* (*Magasin encyclopédique*, VIII. an., tome 5 (1803), pp. 438–67, accompanied by a plate giving the text, transliteration and translation of Niebuhr B and G.); reviews of the other three papers were given in *Göttingische gelehrte Anzeigen* 6.11.1802, 178. Stück, pp. 1769–72; 14.4.1803, 60. Stück, pp. 593–95, and 23.7.1803, 117. Stück, pp. 1161–64. Grotefend's first publication regarding his decipherment of the Persepolis inscriptions appeared in 1805 in A. H. L. Heeren, *Ideen über die Politik, den Verkehr und den Handel, der vornehmsten Völker der alten Welt*, 2. sehr vermehrte und verbess. Aufl. 11 (1805), pp. 931–60 Beylage 1: G. F. Grotefend, *Ueber die Erklärung der Keilschriften, und besonders der Inschriften von Persepolis*. It is strange to see the year 1815 given in the scientific literature as the year of the first Grotefend publication (Fr. Delitzsch, *Assyrische Grammatik* (1889), p. 60*; ²(1906), p. 36*; F. H. Weissbach, *Die Achämenideninschriften zweiter Art* (1890), p. 3 (*Assyriologische Bibliothek* IX); A. J. Booth, *The Discovery and Decipherment of the trilingual cuneiform inscriptions* (1902), p. 170; R. W. Rogers, *A History of Babylonia and Assyria* ³1 (1915), p. 70*); and J. Friedrich, *Entzifferung verschollener Schriften und Sprachen* (1954), p. 49.) – Grotefend's original papers from 1802–03 were found in the archives of the Göttingen Academy and published by Wilhelm Meyer in *Nachrichten von der Königlichen Gesellschaft der Wissenschaften zu Göttingen* (1893), No. 14.

³ The Hanoverian Rud. Erich Raspe († 1791) is especially known as the publisher (i. e. author) of *Baron Munchausen's Narrative of his marvellous travels and campaigns in Russia* . . . (London 1785; ¹Oxford 1786), which was translated into all languages and to this very day is read with enjoyment all over the world. The book was based on the extravagant stories of a Hanoverian squire Baron Karl Friedrich Hieronymus von Münchhausen. Raspe was originally professor and librarian at Kassel, but as he could not distinguish between *meum* and *tuum*, he had to fly to England, where he settled at Oxford.

15099–15102, in Mr. Charles Townley's possession, three lines. No. 653, the cameo mentioned by Raspe, "formerly in the Cabinet of Prieur Vaini at Rome", has been so badly copied that it is useless, whereas Townley's cylinder seal is well copied; in Nos. 651–52 few signs are correctly given. [Reprints: Joseph Hager, *A Dissertation on the newly discovered Babylonian Inscriptions* (London 1801), Plate II, Figs. 1, 2 (Nos. 651–52, 15099–15102), Pl. IV (No. 653); Vivant Denon, *Voyage dans la Basse et la Haute Égypte, pendant les campagnes du général Bonaparte* (Paris 1802), p. XL No. 9, Pl. 124,9 (Nos. 651–52); G. F. Grotefend, *Beweis, dass alle babylonische Keilschrift . . . zu einerlei Schriftgattung und Sprache gehöre*, Plate: F (*Fundgruben des Orients* VI (1818), pp. 143–62); G. F. Grotefend, *Neue Beiträge zur Erläuterung der babylonischen Keilschrift . . .* (1840), p. 5 Fig. 1].

10. 1800: Frederik Münter, *Undersøgelser om de persepolitanske Inscriptioner*. 1–2. Afhandling, Kjøbenhavn 1800 (offprint of *Det kongelige danske Videnskabers-Selskabs Skrifter for Aar 1800* (1801)), Pl 2 gives a useless copy of a Babylonian cylinder seal inscription; according to J. Hager, *Dissertation on . . . Babylonian Inscriptions* (1801), p. 8, Münter's cylinder seal is taken from Abbé Beauchamp's Paris collection.

11. 1801: Joseph Hager, *General Observations on the Persepolitan Characters, with a Description and Representation of some bricks lately sent to Europe from the site of antient Babylon* (*The Monthly Magazine* . . . August 1801, pp. 2–6) publishes one of the building brick inscriptions (= Pl. 1 in No. 12, see below) which in the same year, at the request of the East India Company of 18.10.1797 (see p. 66) was sent to London from the Hillah district, i.e. Babylon [Reprint: A. A. H. Lichtenstein in *Braunschweigisches Magazin* (1801), see below, No. 13.]

12. 1801: Joseph Hager, *A Dissertation on the newly discovered Babylonian Inscriptions* (London 1801) gives 9 Babylonian inscriptions from the Hillah district (see above, No. 11): on 4 inscribed bricks, on 3 cylinder seals and a fragment of 8 lines of a Tukulti-Ninurta I¹ (1234–1198) inscription. The copies are handsomely executed and can be used for further study save for one. Hager was of Austrian descent, born in Milan in 1757, died in Paris in 1819: he early studied oriental languages in the libraries of Constantinople, Madrid, Leyden, and

¹ As regards other transcriptions of the last part of the royal name, see my *Chronology of the Shub-ad Culture* (1941), pp. XIII–XVI.

Oxford. During his stay in England he was a contributor to *The Oriental Collections* . . . ed. by W. Ouseley 1797–99. After the publication of the above-mentioned book, he went to Paris in 1802, at the invitation of Napoleon, to prepare a dictionary of Chinese in Latin and French; in 1806 he was at Oxford, ending his career in Pavia in 1809 as a teacher of oriental languages. After Hager's departure to France (1802) the East India Company's collected material of inscriptions (see p. 67 and above under No. 11) was published in part by Thomas Fisher, Browne, and J. Ryland. [Reprints: A single leaf, without mention of place or date of printing, signed "Fisher delineavit—Browne sculpsit", containing 3 brick inscriptions from Babylon and a drawing of a brick with an inscription (= Hager, Pl. 4: 51.2: 1); Thomas Fisher, *An inscription of the size of the original, copied from a stone lately found among the ruins of ancient Babylon* . . . (1802), signed "T. Fisher del.¹ 1802 J. Ryland sculp." (= Hager's Tukulti-Ninurta inscription)¹].

13. 1801: Anton. August. Henric. Lichtenstein, *Tentamen palaeographiae Assyro-Persicae* . . . (*Braunschweigisches Magazin* 1801), Pl. VIII shows a Babylonian cylinder seal with a quadrilinear inscription, the copy is very bad and no use at all for study; according to Dorow (see below), the original is in the Florentine Museum and the drawing was made by Baron Banks, London. Lichtenstein's *Tentamen* was reprinted without alterations as an independent book, Helmstadii 1803. [Reprint: W. Dorow, *Morgenlaendische Alterthümer* I (1820), Tab. 2: 1].

[14. 1802: Vivant Denon, *Voyage dans la Basse et la Haute Égypte, pendant les campagnes du général Bonaparte* (Paris 1802), p. XL Pl. 124,3, gives "un fragment de granit près de Suez", on which is seen one line of an Old Persian inscription; the Suez Stone, which was found in the year 1800, was one of Darius' quadrilingual Egyptian inscriptions (cf. above, No. 6, where a similar Xerxes inscription is mentioned), but only a few letters of the Babylonian text remained and nearly the whole of the Susian was lost, whereas twelve lines of the Old Persian inscription were seen. For further discussion and a reproduction of fragments of the Suez Stone, see de Rozière, *Notice sur les ruines d'un monument persépolitain découvert dans l'Isthme de Suez* (*Description de l'Égypte* . . . Antiquités, Mémoires I (1809), pp. 265–

¹ Hager and Fisher's copies of the Tukulti-Ninurta fragment are collated by E. Unger, *AK* II (1924–25), p. 19.

75)¹ and *Description de l'Égypte* . . . Antiquités. Planches V (1822), Pl. 29, 1-4].

15. 1802: Thomas Fisher, *An engraving of a fragment of Jasper found near Hillah, bearing part of an inscription in the cuneiform character* (1802). Fisher's copies, like Hager's (see above No. 12), are handsome and useful.

16. 1802: A. L. Millin, *Monumens antiques inédits ou nouvellement expliqués* I (Paris 1802), pp. 58-68 Pls. VIII, IX, reproduces Caillou Michaux, i.e. the *kudurru* inscription found by the botanist A. Michaux near Taq-i-Kesra (Ctesiphon); the copy can be used. The inscription was sold by Michaux to the Bibliothèque nationale (Cabinet des antiquités) on 6.10.1800 for 4200 frs.² The first mention of the *kudurru*, and a brief description, was made by Michaux himself in Millin's *Magasin encyclopédique* VI. année, t. 3 (1800), pp. 86-87. Accurate copy in I R 70 (1861). [Reprint of two lines of the inscription: Giuseppe Hager, *Illustrazione d'uno Zodiaco Orientale del Gabinetto delle Medaglie di Sua Maestà a' Parigi, scoperto recentemente . . . in vicinanza dell' antica Babilonia* (Milano 1811, Fol.)].

17. 1803: *An Inscription of the size of the Original, copied from a Stone lately found among the Ruins of ancient Babylon and sent as a Present to Sir Hugh Inglis Bart.¹ by Harford Jones Esq.², the Honorable the East India Company's Resident at Bagdad* (London 1803).³ This was the largest Babylonian inscription published so far, comprising in the later text edition 621 lines (I R 53-58, 1861, with a Neo-Babylonian transcription of the archaic characters: I R 59-64), but the inscription, did not come to play any great part in the decipherment of cuneiform script, any more than the far shorter one on Michaux's *kudurru*, the next longest inscription known, for being unilingual it was unintelligible and obscure, linguistically as well as regarding the contents; very useful, on the other hand, was the list of characters published by Thomas Fisher in 1807.⁴ It was subsequently found to contain one of Nebuchadnezzar II's building inscriptions (Neb. No. 15, see VAB IV, 1912) and was given the name of Nebuchadnezzar's East India House Inscription or Nebuchadnezzar's "Black Stone"

¹ See G. F. Grotefend, *Fundgruben des Orients* . . . VI (1818), pp. 252-58.

² See V. Scheil, *RA* X (1913), p. 13.

³ Published on the 18th August.

⁴ A collection of all the characters, simple and compound, with their modifications, which appear in the Inscription of a Stone found among the Ruins of Ancient Babylon . . . (1807).

Inscription. The copy which was made by Thomas Fisher is seen in a magnificent engraving, very accurately executed by J. Ryland; both Fisher's and Ryland's names appear below in the engraving: "T. Fisher delin.¹ J. Ryland sculp.¹". It must therefore be due to a slip of memory that Sir Ernest Budge¹ in this connection mentions the lithographer R. E. Bowler, who for chronological reasons as well must be regarded as excluded. His name appears for the last time on the title page of IV R 1875. His first lithographical achievement in Assyriology was, as far as I know, the long Tiglathpileser I inscription, from E. Norris' copy, which served as a standard to H. Fox Talbot, Rawlinson, Hincks, and Oppert in their decipherment of the cuneiform writing at the request of the Royal Asiatic Society in 1857.² Bowler was then charged with the work of lithographing Sir Henry Rawlinson's, Edwin Norris', and George Smith's copies of cuneiform inscriptions for the great work *The Cuneiform Inscriptions of Western Asia*, the first four volumes of which contain his lithographical work (I-IV R 1861, 1866, 1870, 1875); finally he has copied a series of cuneiform tablets from the Kuyunjik Collection, British Museum.

18. 1804: G. A. Olivier, *Voyage dans l'empire ottoman, l'Égypte et la Perse* . . . Atlas, 2. livr. Paris an XII (1804), Pl. 33, Fig. 6, reproduces a Babylonian cylinder seal with a three-line inscription, bought at Urfah, northwest of Harran, on the main road to Mardin; the copy is poor and cannot be used.

19. 1806: A. L. Millin, *Monumens antiques inédits ou nouvellement expliqués* II (Paris 1806), pp. 263 ff. Pls. XXXII-XXXV gives 12 inscribed bricks from Abbé J. de Beauchamp's collections (see above pp. 49 and 66), which at the time of publication were at the Bibliothèque impériale, Cabinet des antiquités. The copies are bad, only a few signs have been properly interpreted.

20. 1812: James Justinian Morier, *A Journey through Persia, Armenia, and Asia Minor in the years 1808 and 1809* . . . (London 1812), p. 356 Pl. XXIX No. 5 reproduces Cyrus (the Younger's?) trilingual Murghâb inscription, covering four lines in all, one day's journey northeast of Persepolis; the copy of the Babylonian characters

¹ *Rise and Progress of Assyriology* (1925), p. 95.

² *Inscription of Tiglath Pileser I., King of Assyria B.C. 1150, as translated by Sir Henry Rawlinson, Fox Talbot, Dr. Hincks and Dr. Oppert. Published by the Royal Asiatic Society* (1857).

is not good, whereas the Old Persian signs are reproduced with great accuracy. This quite short inscription, which was of great importance for the first attempts at decipherment, was later independently copied in 1811 by William Ouseley, *Travels in various countries of the East, more particularly Persia* . . . II (London 1821), Pl. XLIX, 5; in 1818 by Robert Ker Porter, *Travels in Georgia, Armenia, Ancient Babylonia* . . . I (London 1821), Pl. 13; and in 1821 by Claudius James Rich, *Narrative of a Journey to the Site of Babylon* . . . (London 1839), Pl. XII; the Babylonian version alone was copied by N. L. Westergaard, *Mémoires de la Société des Antiquaires du Nord 1840-44* (1845), Pl. XVI c; M. [Reprints: Charles Bellino, *Account of the Progress made in Deciphering Cuneiform Inscriptions* (*Transactions of the Literary Society of Bombay* II, 1820, pp. 170-192, Pl. No. 5; read on 30.6.1818), from J. J. Morier 1812; G. F. Grotefend, *Über ein indisches Gemählde* (in W. Dorow's *Morgenländische Alterthümer* II (1821), Tab. III, Fig. 4) and from there in his *Neue Beiträge zur Erläuterung der persepolitischen Keilschrift* . . . (1837), Taf. II, 1 (after R. Ker Porter 1821); A. J. Saint-Martin, *J. As.* II (1823), p. 66 Pl. II; Eugène Burnouf, *Mémoire sur deux inscriptions cunéiformes trouvées près d'Hamadan* . . . (1836), Pl. V (after W. Ouseley 1821).]

21. 1813: Claudius James Rich, *Memoir on the Ruins of Babylon* (*Fundgruben des Orients* . . . III (Wien 1813),¹ pp. 129-162, 197-200), pp. 198-99, Pl. I, gives four inscriptions from Babylonian building bricks (Nos. 1 and 4: 6 lines, Nos. 2-3: 7 lines), Pl. II Fig. 2 a *kudurru* inscription, Fig. 5 another Babylonian inscription, Figs. 7-8 two Babylonian cylinder seals with 2- and 3-line inscriptions. The copies, especially on Pl. II, are not of much use.

22. 1814: G. F. Grotefend, *Explicatio tabulae, quae inscriptiones laterum coctilium in veteris Babylonis . . . repertae . . . conferuntur* (*Fundgruben des Orients* . . . IV (Wien 1814), pp. 331-37) gives eight different kinds of Babylonian legends chiefly from inscribed bricks; these Grotefend has copied accurately from publications by J. Hager 1801 (see No. 12), Millin 1806 (see No. 19), J. Hager 1811 (see No. 16: A. L. Millin) and Rich 1813 (see No. 21), besides from the East India House Inscription (see No. 17). The reason why Grotefend's *Explicatio* is included here as a special text publication is that some few of the legends are copies of Babylonian inscriptions never before published.

¹ As to the reprints published in England see above p. 51 note 2.

from Abbé Campion de Tersan's (Grotefend: Terssant) Paris Collection (see p. 66). On the other hand Grotefend's *Explicatio tabulae* . . . in *Fundgruben des Orients* . . . V (1816), pp. 225–30 presents nothing new as the cuneiform signs are from Th. Fisher's list of characters (1807), see above p. 77.

23. 1814: J. von Hammer [-Purgstall], *Babylonische Talismane* (*Fundgruben des Orients* . . . IV (Wien 1814), p. 86) reproduces a plate with 14 Babylonian cylinder seals, two of which have two lines of inscription each, belonging to the Archduke Johann, Graz; Count Wenceslaus Rzewusky; and Joseph v. Hammer-Purgstall, both in Vienna. The copies are of no use at all.

24. 1814: J. von Hammer [-Purgstall], *Ueber die Talismane der Moslimen* (*Fundgruben des Orients* . . . IV (Wien 1814), pp. 155ff.), reproduces a plate with 15 Babylonian cylinder seals, two of which have two lines each, and three an inscription of three lines each, belonging to the same three owners as mentioned under No. 23. The copies are of no use. The cylinder seals mentioned here and under No. 23 are gifts from C. J. Rich.

25. 1817: John Landseer, *The engraved gems, brought from Babylon to England by Abraham Lockett* (*Archaeologia* XVIII (London 1817), pp. 371–84) reproduces a Babylonian cylinder seal with a two-line inscription; the copy is useless.

26. 1818: Claudius James Rich, *Second Memoir on Babylon* . . . (London 1818) reproduces 9 Babylonian inscriptions in all, as well as two cylinder seals with inscriptions of 1 and 3 lines, respectively, a great enlargement of the material published in the first edition (see No. 21). Among the lengthy inscriptions (Rich's No. 4) may be mentioned Nebuchadnezzar II's canal building inscription (Neb. No. 8, see VAB IV, 1912), which was republished in I R 52, No. 4 (1861). The copies are good and useful as compared with Rich's first publication in 1813 (see No. 21) and are undoubtedly due to Carl Bellino, born on 21.1.1791 at Rothenburg am Neckar, who like the lithographer R. E. Bowler, mentioned under No. 17, was one of the most excellent copyists of the Assyro-Babylonian cuneiform script that ever lived. Bellino studied at Tübingen and Vienna where he met Rich during the latter's vacation in Europe (October 1813–16.3.1816); he became his secretary at Trieste some time after 29.6.1815, and arrived with Rich at Baghdad in the middle of March 1816. In 1817 he accompanied

him on his second visit to Babylon (see p. 51), being also appointed by Rich to join J. S. Buckingham, who arrived at Baghdad on 16.7.1816, and R. Ker Porter (in Baghdad 14.10.1818) on these gentlemen's travels of exploration in Babylonia. The visit to Babylon in 1817 probably marks the beginning of Bellino's copying of Babylonian inscriptions; he himself only published a single treatise (see below No. 29), but the Babylonian inscriptions issued by R. Ker Porter (see below No. 33) are Bellino copies, as well as a number of copies of inscriptions sent at Rich's request to G. F. Grotefend, whose publication from 1805 (see above p. 74²) had made a deep impression on him (see below p. 85). Grotefend published the Bellino copies in 1818, 1837, 1837-42, 1840, 1848, and 1850 (see below Nos. 27, 36, 37, 39, 45, 46) besides printing entirely or in part letters from Bellino accompanying these copies, dated 20.8.1817; 22.5., 31.7., 8.11., 28.11.1818; 19.4., 30.9.1819; and 6.2., 15.4.1820.¹ Among the Bellino copies issued by Grotefend we must especially mention the so-called Sennacherib-Bellino Cylinder (BM 22502), which is much superior to the one published by the British Museum (i.e. Layard 1851, Pls. 63-64), and about which copy H. Fox Talbot says that it is the "most wonderful instance of patient accuracy which is to be found in the whole range of archaeological science."² In April 1820 Rich set out on his journey in Kurdistan³ with Sulaimaniyah as his objective, accompanied by Bellino and one Mr. Bell, who had succeeded Dr. Hine as surgeon to the Residency. At Sulaimaniyah Bellino left the party to pay an antiquarian visit to Hamadân (Ekbatana) for the purpose of copying the trilingual Mount Elvend inscriptions. But Bellino never attained his object, he only managed to copy the Old Persian column of one of the Mount Elvend inscriptions (see below No. 36). He was taken ill with a serious fever, and though he recovered so far that he could rejoin Rich at Mosul on 31.10.1820 (see p. 47), he died in that town on the 13th of November of the same year, before he had attained the age of 30.⁴ His early death was as great

¹ See J. Flemming, *BA* I (1890), p. 83; according to Grotefend, *ZKM* VII (1850), p. 216, the last letter from Bellino is dated the 15th April, from this Flemming dissents.

² *JRAS* XVIII (1861), p. 77.

³ *Narrative of a Residence in Koordistan, and on the Site of Ancient Nineveh* ... Edited by his widow, I-II (1836).

⁴ See *ibid.* II (1836), p. 126, and Rich's letter to J. von Hammer, published by Johannes Flemming, *BA* I (1890), pp. 84-85.

a loss to Rich, who died at Shīrāz barely a year later on the 5th October 1821, as to incipient Assyriology.

27. 1818: G. F. Grotefend, *Beweis, dass alle babylonische Keilschrift . . . zu einerlei Schriftgattung und Sprache gehöre* (*Fundgruben des Orients* . . . VI (Wien 1818), pp. 143–62) has a plate with 6 examples of Babylonian inscriptions; one of these (B) is a Bellino copy of an 8-line inscription in the possession of the Catholic Armenian Vicar General of Ispahan (see above p. 68 and below No. 45).

28. 1819: William Ouseley, *Travels in various countries of the East, more particularly Persia* . . . I (London 1819), Pl. XXI shows six inscribed bricks and pieces of baked clay inscribed, from the Hillah district (+ two cylinder seals without inscriptions); the copies are useless, and so is the very poor copy of an inscription from a Babylonian cylinder seal published in II (1821), Pl. XXXVII.

29. 1820: Charles Bellino, *Account of the Progress made in Deciphering Cuneiform Inscriptions* in the *Transactions of the Literary Society of Bombay* II (1820), pp. 170–192 (written on 29.3.1818, read on 30.6.1818): No. 8 shows a seven-line inscription from a Babylonian cylinder seal owned by Dr. John Hine, Baghdad (see p. 51¹). [Reprints: G. F. Grotefend, *Erläuterungen über einige babylonische Cylinder mit Keilschrift* (W. Dorow, *Morgenlaendische Alterthümer* I 1820), Pl. II: 2, gives an “Abzeichnung”, received from Rich, of John Hine’s green jasper cylinder in natural size; R. Ker Porter, *Travels in Georgia* . . . II (1822), Pl. 79: 6.]

30. 1820: G. F. Grotefend, *Erläuterung über einige babylonische Cylinder mit Keilschrift* (W. Dorow, *Morgenlaendische Alterthümer* I (1820), pp. 23–56), Tab. 1 shows a red jasper cylinder seal from Nineveh, owned by Dorow, with a seven-line inscription in Assyrian; the copy is not at all bad.

31. 1821: William Ouseley, *Travels in various countries of the East, more particularly Persia* . . . II (London 1821), Pl. XXXVII, see above, No. 28.

32. 1821: Erasmus Nyerup, *Catalogus Librorum Sanskritanorum, quos Bibliothecæ Universitatis Havniensis vel dedit vel paravit Nathanael Wallich* (Hafniæ 1821), Additamentum (“characteres lateris Babylonici”): a 7-line inscription from one of Nebuchadnezzar II’s numerous building bricks, which Abraham Lockett, accompanying C. J. Rich in 1811 (see above p. 51) “eum ipse a rudibus Babylonis

attulerat''; presented as a gift to Wallich by Lockett then living at Fort William, Calcutta. The copy is not at all bad, several signs have been properly interpreted. As for independent later copies of the same type of Nebuchadnezzar 7-line inscription, see e.g. J. Ménéant, *Inscriptions assyriennes des briques de Babylone* (1859), Tab. No. 1: A; as for the 6-line inscription (see above p. 68) see *ibid.* No. 1: B.

33. 1822: Robert Ker Porter, *Travels in Georgia, Persia, Armenia, Ancient Babylonia* . . . II (London 1822), Pls. 77–80 reproduces inscriptions from Babylon on bricks and marbles (Pl. 77; 77a from Al Uḫaimir,¹ the ancient Kish), a clay cylinder inscription from Babylon, a fragment of the East India House Inscription (Pl. 78, see above, No. 17), and cylinder seal inscriptions (Pls. 79–80); as mentioned above, p. 81, most of these excellent copies are due to Bellino. [Reprint of Pl. 80,1 (a very badly copied cylinder seal inscription): G. F. Grotefend, *Urkunden in babylonischer Keilschrift* . . . (1837–42), Inscription I (see below No. 37)].

34. 1836: Claudius James Rich, *Narrative of a Residence in Koordestan, and on the Site of Ancient Nineveh; with Journal of a Voyage down the Tigris to Bagdad, and an Account of a Visit to Shiraz and Persepolis*. Edited by his widow, II (London 1836), p. 131, shows a facsimile of Assyrian writings from Nimrūd. [Reprint: G. F. Grotefend, *Keil-Inschriften aus der Gegend von Nineveh* . . . Nos. 3, 6, 7, 8 (ZKM VII (1850), pp. 63–70, 386)].

35. 1836: Eugène Burnouf, *Mémoire sur deux inscriptions cunéiformes trouvées près d'Hamadan et qui font maintenant partie des papiers du Dr Schulz* (Paris 1836), Pl. 4 shows Xerxes' (but not Darius') trilingual Mount Elvend inscription near Hamadân from a copy found among Dr. Éd. Schulz's posthumous papers. The first travellers to notice the Mount Elvend inscriptions were J. M. Kinneir (1810),² J. J. Morier (1813),³ and R. Ker Porter (1817–20),⁴ who reached the place when the day was far advanced and had no time to make a copy. Bellino was prevented by a violent fever from finishing his copies of the Mount Elvend inscriptions (see above p. 81). But about

¹ See H. V. Hilprecht, *The Excavations in Assyria and Babylonia* (1904), p. 49 (*The Babylonian Expedition of the University of Pennsylvania*, Series D, I).

² *A Geographical Memoir of the Persian Empire* . . . (1813), p. 126.

³ *A Second Journey through Persia, Armenia and Asia Minor to Constantinople, between the years 1810 and 1816* . . . (1818), p. 267.

⁴ *Travels in Georgia* . . . II (1822), p. 120.

1827 Mr. Steuart (Stewart) and M. Vidal, the consular dragoman at Aleppo, made a copy and communicated it to Fr. É. Schulz, sometime Professor at Giessen (Hesse), who in 1826 had been sent to Armenia by the French government, to study the Van inscriptions. He reached the spot in July 1827, he copied 42 Vannic inscriptions but was unfortunately murdered by the Kurds in 1829. His papers found their way into the hands of Félix Lajard of Paris, who passed them on to A. J. Saint-Martin; the latter did not manage to publish Schulz's material before his death (1832); from his estate they passed on to E. Burnouf.¹ The copy of Xerxes' Mount Elvend inscription which Burnouf published is thus derived from Steuart and Vidal, not from the hand of Fr. É. Schulz. Henry Rawlinson copied the cuneiform inscriptions at Mount Elvend in April 1835, and they were a great help to him when he deciphered the Bihistûn inscription, but the copies were not published. [Reprint: Fr. Éd. Schulz, *Mémoire sur le lac de Van et ses environs*. (Ed. by J. M[énant]), Pl. VII (*J. As.* 3. sér., t. IX (1840), pp. 257 ff.)].

36. 1837: G. F. Grotefend, *Neue Beiträge zur Erläuterung der persepolitischen Keilschrift nebst einem Anhang über die Vollkommenheit der ersten Art derselben* . . . (Hannover 1837), Taf. IV reproduces, from Bellino's copies, two Babylonian inscribed baked bricks. (P. 9, Taf. I shows a Bellino copy of the first, Old Persian, column of one of the Mount Elvend inscriptions, which Grotefend presented to the University Library of Tübingen, where Bellino had been educated.)

37. 1837-42: G. F. Grotefend, *Urkunden in babylonischer Keilschrift*. I.-4. Beitrag (*ZKM* I-III Göttingen 1837, 39, 40, IV Bonn 1842) gives five inscriptions derived from Bellino (A, B, C, D, F) as well as two cylinder seal inscriptions (G, H), perhaps from Rich and Ouseley's collections. (Grotefend's inscription E, a few Old Persian signs, was a reprint from *Monumenti inediti. Pubbl. dall' Istituto di corrispondenza archeologica* II (1834-38), Pl. LI). [Reprint of Grotefend's Inscription A: Guil. Gesenius, *Scripturae linguaeque Phoeniciae monumenta quotquot supersunt* . . . III (1837), Tab. 32: LXXVIIa].

38. 1839: Claudius James Rich, *Narrative of a Journey to the Site of Babylon in 1811* . . . *Second Memoir on the Ruins* . . . *With Narrative of a Journey to Persepolis*. Edited by his widow . . . (London 1839).

¹ Cf. E. Burnouf, *Mémoire* . . . (1836), pp. 12 f.

Pls. XIX and XXVI (Persepolis Nos. 5 and 7: two trilingual inscriptions from Persepolis not copied before by Niebuhr or his predecessors). Rich arrived at Persepolis on the 17th August 1821 and within a space of six days he performed the unique feat of copying all Xerxes' Persepolis inscriptions except one. He employed workmen to clear away the rubbish which often concealed them, and discovered for the first time inscriptions never known before him.¹ "I was actually diligent enough to fall to work at copying the inscriptions; and during the six days we remained at Persepolis I copied all the inscriptions except one. I have found much to corroborate Grotefend's system, and have admired his sagacity. The labour I have gone through will greatly assist him."² After his arrival at Shîrâz, where a violent cholera raged, Rich refused to quit the town, assisting the sick and dying, administering the necessary medicines. But on the 4th October 1821 he was himself taken seriously ill with the disease, and on the following morning, at the age of only 35 years, the founder of Assyriology expired at Shîrâz, where he was interred.

39. 1840: G. F. Grotefend, *Nene Beiträge zur Erläuterung der babylonischen Keilschrift nebst einem Anhang über die Beschaffenheit des ältesten Schriftdrucks bei der vierten Secularfeier der Erfindung des Bücherdrucks von Gutenberg*. (Hannover 1840), p. 5 Fig. II, reproduces a trilingual Darius cylinder seal inscription (acquired prior to 1838 by the British Museum from the British consul general Mr. Salt's private collection for £23); p. 41 shows a Bellino copy of a Babylonian inscription; a plate reproduces 28 different Babylonian legends (see above No. 22), which are Bellino copies of 40 inscribed bricks in C. J. Rich's collection.

40. 1840: Fr. Éd. Schulz, *Mémoire sur le lac de Van et ses environs*. (Envoyé à Paris le 8 juin 1828.) (Ed. by J. M[énant]) (*J. As.* 3. sér., t. IX (1840), pp. 257-323), Pl. VIII reproduces Darius' trilingual Mount Elvend inscription; Pl. II: IX-XI reproduce Xerxes' trilingual Van inscriptions. The copies are splendid, the script is Assyrian. The publication contains in all 42 inscriptions distributed over eight large plates, 39 of them being unilingual Vannic. Cf. also No. 35.

41. 1843-44: (P. É. Botta,) *Lettres de M. Botta sur ses découvertes à Ninive*. A M. J. Mohl, à Paris (*J. As.* 4. sér., t. II (1843), pp. 61-72.

¹ As to details cp. A. J. Booth, *Discovery and Decipherment* ... (1902), pp. 99 f.

² *Narrative of a Residence in Koordistan* ... II (1836), p. 223.

201–14; t. III (1844), pp. 91–103, 424–35; t. IV (1844), pp. 301–14) reproduce 15 Assyrian Khorsabad inscriptions. The letters were published separately with the title *Lettres de M. Botta sur ses découvertes à Khorsabad, près de Ninive*, publiées par M. J. Mohl (Paris 1845).

42. 1845: Adrien de Longpérier, *Vase fabriqué en Égypte pendant la domination perse* (*RArch.* II 1844–45, Paris 1845, pp. 444–51), p. 446 reproduces a quadrilingual vase inscription (cp. above the Caylus Vase, No. 6), containing Artaxerxes' name; the so-called Venezia Vase is kept at Il Tesoro di San Marco, Venezia. [Reprint: N. L. Westergaard, *Zur Entzifferung der Achämenidischen Keilschrift zweiter Gattung* (*ZKM* VI (1845), pp. 337–466, Pl. VIII.)]

43. 1845: N. L. Westergaard, *On the deciphering of the second Achaemenian or Median species of arrowheaded writing* (*Mémoires de la Société royale des Antiquaires du Nord 1840–1844* (Copenhagen 1845), pp. 271–439), Tab. XIII–XVIII show the Babylonian version of seven inscriptions from Persepolis, of the Murghâb inscription (see No. 20), and of the inscription Naḫsh-i-Rustam a (see *VAB* III 1911, p. XVIII): B and G (Tab. XIII); D (Tab. XIV); H (Tab. XV); C (Tab. XVI); L and M (= Murghâb) (Tab. XVIc); E (Tab. XVII), and Naḫsh-i-Rustam a (Pl. XVIII). West. B = Niebuhr C; West. C = Rich (see No. 38) Nos. 1 and 5; West. E = Rich No. 2; West. G = Niebuhr E, Rich Nos. 3 and 4; West. H = Niebuhr L. Westergaard's copies of inscriptions, which are independent of those of his predecessors (Niebuhr, Morier, Rich), while Naḫsh-i-Rustam a has been copied for the first time, are distributed thus over the reigns of the Achaemenian rulers: Darius B, H, L, NR a; Xerxes C, D, E, G; Cyrus the Younger (?) M. Copies of the Susian version of the above-mentioned 9 inscriptions were given by Westergaard in *ZKM* VI (Bonn 1845), Pls. VI–VIII.

44. 1847: Isidore Löwenstern, *Exposé des éléments constitutifs du système de la troisième écriture cunéiforme de Persépolis* (Paris, Leipzig 1847), p. 5 reproduces a 13-line Neo-Babylonian inscription fragment with the name of Artaxerxes I, found at Persepolis by Lottin de Laval (see above, p. 69): "Dans le fragment d'une inscription que M. Lottin de Laval a rapporté de Persépolis, et que le célèbre voyageur a reproduit sur l'un des deux dessins, que je dois à sa bienveillance, on rencontre un nom propre . . . dont il n'existe que trois signes . . . que je suppose appartenir au nom d'Artaxerxe . . ." (p. 76³). [Reprints: L. Félicien J. C. de Sauley, *Recherches sur l'écriture cunéiforme assy-*

rienne. *Inscriptions des Achéménides* (Paris 1849), p. 57; Eugène Flandin et Pascal Coste, *Voyage en Perse . . . Perse ancienne. Planches Tome III* (Paris s. d.), Pl. 129: B].

45. 1850: G. F. Grotefend, *Bemerkungen zur Inschrift eines Thongefäßes mit babylonischer Keilschrift* (*Abhandlungen d. Königl. Gesellschaft d. Wiss. zu Göttingen* IV. Von den Jahren 1848–50 (1850), pp. 1–18) reproduces Bellino's more than 30 year old copy¹ of a Nebuchadnezzar II cylinder inscription (Neb. No. 9, see VAB IV, 1912), then in the possession of the Catholic Armenian Vicar General of the Bishopric of Ispahan; from this Grotefend had published 8 lines in 1818 (see above, No. 27). Grotefend's publication was submitted to the Göttingen Academy on 12.5.1848. The inscription is often called the Grotefend Inscription (or Cylinder); the original at some time between 1850 and 1861 passed into the possession of Sir Thomas Phillips, Middlehill, after which it was reproduced in I R 65–66 (1861).

46. 1850: G. F. Grotefend, *Bemerkungen zur Inschrift eines Thongefäßes mit ninivitischer Keilschrift* (*Abhandlungen d. Königl. Gesellschaft d. Wiss. zu Göttingen* IV. Von den Jahren 1848–50 (1850), pp. 175–193) reproduces Bellino's copy of a Sennacherib inscription (see above, p. 81) found by Rich on Nabî Yûnus, and after 1825 in the possession of the British Museum. In addition to the Taylor Cylinder (see above p. 69), the Bellino Cylinder is our main source of knowledge of Sennacherib's history. The publication was submitted to the Göttingen Academy on 8.2.1850.

§ 9. As a natural supplement to the list of publications dealing with Assyro-Babylonian inscriptions, we shall now give a brief regionally arranged list of publications from the same periods of Old Persian and Susian inscriptions, continuing the short list in § 6, at the close. Only the name of the author and the year of publication will be mentioned wherever the title itself has already been stated in the above Assyro-Babylonian list. The primary copies only, not reprints, are included below.

1. Persepolis (Takht-i-Jamshîd) [trilingual].

Chardin 1711.

¹ Communicated to Grotefend with Bellino's letters (see above, p. 81) dated 22.5. and 31.7.1818, see Grotefend, *Neue Beiträge zur Erläuterung der babylonischen Keilschrift . . .* (1840), pp. 18–22.

Kaempfer 1712.

de Bruin 1714.

Persepolis illustrata: or, The ancient and royal palace of Persepolis in Persia . . . Printed for S. Harding (1739), Pls. VII and IX.

Niebuhr 1778.

Ouseley 1821.

Ker Porter 1821.

William Price, *Journal of the British Embassy to Persia; . . . also A Dissertation upon the Antiquities of Persepolis* (1825).

Inscriptions from the ruins of Persepolis copied from casts taken on the spot and now in the Museum of the Royal Dublin Society. Dublin 1835, 4to.

Rich 1839.

Westergaard, *ZKM* VI (1845), Pls. VII–VIII (Susian version).
(Texier 1842–52).

(Flandin et Coste 1843–54).

II. Murghâb (Pasargadae) [trilingual].

Morier 1812.

Ouseley 1821.

Ker Porter 1821.

Rich 1839.

Westergaard, *ZKM* VI (1845) Pl. VIII (Susian version).
(Texier 1842–52).

(Flandin et Coste 1843–54).

III. Naksh-i-Rustam. (Darius' grave north of Persepolis) [trilingual].

a.¹ Old Persian: Chr. Lassen, *ZKM* VI (1845), Pls. II–V (from Westergaard's copy); Susian: Westergaard, *Mémoires . . .* (1845), Pl. XII and *ZKM* VI (1845), Pl. VI; Babylonian: Westergaard, *Mémoires . . .* (1845), Pl. XVIII.

b. Old Persian: Chr. Lassen, *ZKM* VI (1845), p. 120 (7 lines from Westergaard's copy); H. Rawlinson, *JRAS* X (1847), p. 312 (15 lines in transcription: "From Mr. Westergaard's MS. communicated to myself").

¹ As to the designations of the inscriptions, see F. H. Weissbach, *VAB* III (1911), pp. XVIII–XIX.

c-d. Old Persian: H. Rawlinson, *JRAS* XII (1850), pp. XIX-XX;
 Susian: E. Norris, *JRAS* XV (1855), pp. 432-33; Babylonian:
 H. Rawlinson, *JRAS* XIV₁ (1851), p. 21.

IV. Mount Elvend [trilingual].

Burnouf 1836.

Schulz 1840.

(Texier 1842-52).

(Flandin et Coste 1843-54).

V. Bihistûn [trilingual].

The rock presents a magnificent appearance, rising in perpendicular form to a height of c. 1700 feet, it is situated on the road from Hamadân (Ekbatana) to Kirmânshâh about twenty miles before reaching the latter place. Diodorus Siculus II 13¹ relates that the rock was sacred to Zeus, and that Semiramis, on the occasion of a campaign against the Medes, caused part of the face of the rock to be polished and then had her likeness, surrounded by a hundred men of her guard, inscribed (carved) on it, accompanied by an inscription in (As)syrian characters commemorating her victorious march from Babylon to Ekbatana. Diodorus Sic. XVII 110² also relates that Alexander the Great visited the rock on his march from Susa to Ekbatana. The Arabian geographer and explorer Ibn Hauqal (10th century) describes the relief, later so renowned, as representing a school scene. The reason for these uncertain records from Antiquity and the Middle Ages is that the sculptured bas-relief and the great trilingual inscription which Darius I caused to be cut on the rock, are from 300 to 400 feet above the ground, occupying a prepared surface, 60 by 23 feet. Up to 1835, when H. C. Rawlinson began the copying of the inscription, at first merely the relief, later also the inscription, were observed and discussed by the following European travellers: J. B. Tavernier (1638—

¹ τὸ δὲ Βαβυλωνίον ὄρος ἐστὶ μὲν ἱερὸν Διὸς, ἐκ δὲ τοῦ παρὰ τὸν παρὰ δέισον μέρος ἀποτομῶδες ἔχει πέτρας εἰς ὕψος ἀναινωσάσας ἐπτακαίδεκα σταδίους. οὐ τὸ κατώτατον μέρος καταξύσασα τὴν ἰδίαν ἐνεχάραξεν εἰκόνα, δορυφόρους αὐτῇ παραστήσασα ἑκατόν. ἐπέγραψε δὲ καὶ Συρίοις γράμμασιν εἰς τὴν πέτραν ὅτι Σεμίραμις τοῖς σάγμασι τοῖς τῶν ἀκολουθούντων ὑποσυχίων ἀπὸ τοῦ πεδίου χώσασα τὸν προειρημένον κρημνὸν διὰ τούτων εἰς τὴν ἀκρόρειαν προσανέβη.

² τέλος δὲ προσμείνας ἡμέρας (μὲν τινος) ἀνέξενε καὶ παρεγκλίνας τὴν ὑποκειμένην ὁδὸν θάλας ἐνεκεν ἦλθεν εἰς τὴν ὀνομαζομένην Βαβυλωνίαν, θεοπρεπεστάτην τε χώραν ὁδὸν καὶ πλήρη καρπῶν δένδρων καὶ τῶν ἄλλων ἀπάντων τῶν πρὸς ἀπόλαυσιν ἀνηκόντων.

63),¹ Ambrogio Bembo (between 1675 and 1700),² J. Otter (1734–44),³ G. A. Olivier (1793–99),⁴ P. A. L. de Gardane (1807),⁵ J. M. Kinneir (1808–10),⁶ J. S. Buckingham (1816f.),⁷ Ker Porter (1818),⁸ G. T. Keppel, Earl of Albemarle (1824).⁹ But on account of the inaccessibility of the rock and the elevation of the inscription none of these observers was able to describe with accuracy the bas-reliefs, far less to copy the inscription. Thus Gardane thought he saw a cross and the twelve apostles below it, Ker Porter, who examined the sculptures through a telescope, identified the minor figures as representative of the Ten Tribes standing before Shalmaneser, King of Assyria and the Medes; only Kinneir made the correct observation that the bas-reliefs must be assigned to the same period as the sculptures at Takht-i-Jamshid. Finally it should be mentioned that Bellino, on his unsuccessful journey to Mount Elvend (see p. 81), saw the Bihistûn inscription shortly before his death (13.11.1820), and that Eugène Flandin in

¹ *Les six voyages de Jean Baptiste Tavernier ... qu'il fait en Turquie, en Perse, et aux Indes ...* I (Paris 1677), p. 284, does not mention the name of Bihistûn, nor the inscription, but says: "Entre Sahanna et Polieha ... la seule haute montagne, qu'on voit sur cette route ... on y voit quantité de tres-grandes figures d'hommes vestus en Prestres ..."

² *Viaggio e giornale per parte dell' Asla di quattro anni fatti da me Ambrosio Bembo Nobile Veneto* has only been published in extracts by Jacopo Morelli in his *Dissertazione intorno ad alcuni viaggiatori eruditi veneziani poco noti* (1803) and was reprinted in Morelli's *Operette* II (1820), pp. 85–123 (about Bihistûn see pp. 104–106; the inscription is not mentioned).

³ *Voyage en Turquie et en Perse* I (1748), pp. 186–188; Otter is the first to mention the inscription: "des Inscriptions qui ont été effacées" (p. 188).

⁴ *Voyage dans l'empire ottoman, l'Égypte et la Perse ...* III (1807), pp. 23–26 ("portant une inscription que nous regrettons bien de n'avoir pas copiée", p. 24). In the *Atlas* accompanying the travel account (an IX, 5: 1801), Pl. 40 the relief is first reproduced.

⁵ *Journel d'un voyage dans la Turquie, d'Asie et la Perse, fait en 1807 et 1808* (Paris 1809); German translation Weimar 1809, pp. 79–80 (*Bibliothek der ... Reisebeschreibungen* 40) mentions the relief but not the inscription.

⁶ *A Geographical Memoir of the Persian Empire ...* (London 1813), p. 131: "... a group of figures, in form of a procession, sufficiently perfect to show that they are of the same age and character as those of Persepolis."

⁷ *Travels in Assyria, Media, and Persia ...* (London 1829), p. 144 mentions the inscription, its length being estimated at between 200 and 300 lines.

⁸ *Travels in Georgia, Persia ...* II (London 1822), pp. 149 ff. Pls. 59–60, reproduces the rock and the relief; Ker Porter, who stayed at the place on the 21st and 22nd September, was much interested in the inscription, but "even with the help of my glass I was at too great a distance to copy distinctly the inscription on the robe" (p. 158, cp. Pl. 60).

⁹ *Personal Narrative of a Journey from India to London in the year 1824* II (London 1827), pp. 218 ff.

June 1840 in vain tried to copy the inscription, declaring that it was impossible to approach, but in April 1835 Lieutenant Henry Creswicke Rawlinson copied the Mount Elvend inscription¹ which he did not publish but which was of great aid to him in his decipherment, and he frequently during the summer and autumn of 1835 visited the rock of Bihistûn and began to copy the inscription. He continued in 1836 and 1837 and at the close of the latter year he had copied about 200 lines of the Old Persian text. The outbreak of the Afghan war and his resulting military duties removed him from the Kirmânshâh district, and not until 1843 when he was appointed British Consular and Political Agent at Baghdad as successor to Colonel J. Taylor, could he in the summer of 1844 continue copying the Bihistûn inscription. He then realised that his copies from 1835-37 were useless and started a recopying of the Old Persian, and a first copying of the Susian inscription; and finally in 1847, amid unexampled difficulties, he copied the Babylonian version of Darius' Bihistûn inscription.² The results of Rawlinson's unique achievement appeared in the following publications:

Major H. C. Rawlinson, *The Persian Cuneiform Inscription at Behistun, decyphered and translated; with a Memoir on Persian Cuneiform Inscriptions in general* . . . London 1846 (JRAS X 1847): Chapters I-V, LXXI + 349 pp. - Chapter VI: *Vocabulary of the ancient Persian language*, was published in JRAS XI, 1849.

Major H. C. Rawlinson, *On the Inscriptions of Assyria and Babylonia* (JRAS XII 1850, pp. 401-483).

Major Rawlinson, *Note on the Persian Inscriptions at Behistun* (JRAS XII 1850, pp. I-XXI).

Lieut.-Col. H. C. Rawlinson, *Memoir on the Babylonian and Assyrian Inscriptions* (JRAS XIV, 1851), 32 pp. + 17 Plates + CVI pp. Rawlinson's Babylonian version of Darius' Bihistûn inscription was reprinted in III R (1870), Pls. 39-40.

E[dwin] Norris, *Memoir on the Scythic Version of the Behistun Inscription* (JRAS XV 1855, pp. 1-213).

A new transcription of the Babylonian columns of the Achaemenian

¹ JRAS X (1847), pp. 4-5.

² *Notes on some Paper Casts of Cuneiform Inscriptions upon the sculptured Rock at Behistun exhibited to the Society of Antiquaries* (Archaeologia XXXIV (1852), pp. 73-76; read on 7.3.1850).

inscriptions was published by Carl Bezold in 1882 (*AB* II). A new edition of the trilingual Bihistûn inscription was published in 1907 by L. W. King and R. C. Thompson with the title: *The Sculptures and Inscription of Darius the Great on the Rock of Behistûn in Persia. A new Collation of the Persian, Susian and Babylonian Texts, with English Translations etc.* (London 1907). A transcription and German translation of all the Achaemenian cuneiform inscriptions, including the Bihistûn inscription, see F. H. Weissbach, *Die Keilinschriften der Achämeniden* (*VAB* III, 1911).

VI. Varia (in chronological order).

- | | |
|--|--|
| 1. The Xerxes Vase [quadrilingual] | Caylus 1762.
Saint-Martin 1823. ¹ |
| 2. The Suez Stone [trilingual] | Denon 1802. |
| 3. Some few Old Persian signs | <i>Monumenti inediti</i> . . . II
(1834–38). ² |
| 4. Xerxes' Van inscriptions [trilingual] | Schulz 1840. |
| 5. A trilingual Old Persian seal | Grotefend 1840. |
| 6. The Artaxerxes Vase [quadrilingual] | Longpérier 1845. |
| 7. An Old Persian seal | Grotefend, <i>ZKM</i> VII
(1850), p. 386 No. 5. |

§ 10. Our above list of Assyro-Babylonian inscriptions shows that no small amount of material, containing amongst other things the long Nebuchadnezzar inscription, was available for study. But the inscriptions only started to live and bear us their message of the ancient culture of Mesopotamia when the first results of the excavations in the near neighbourhood of the ancient Nineveh reached the European museums, and when the Assyro-Babylonian cuneiform writing could be read and understood. Both these events took place in the years between 1847 and 1851 as seen below in Chapter III.

The greater part of P. É. Botta's transportable objects discovered in the Khorsabad excavations arrived at Le Havre in December 1846, and at Paris in February 1847, and on the 1st May the same year the Louvre threw open its doors to an exhibition of these unique monuments. A. H. Layard's museum treasures from the Nimrûd excavations

¹ See above p. 73 No. 6.

² See above p. 84 No. 37.

arrived at Chatham, Kent, in October 1848, and were transferred from there to the British Museum, London. As regards the inscription material all earlier publications now received an abundantly rich supplement which was made accessible to the public in the two great works: P. É. Botta, *Monument de Ninive*. Tome III–IV: Inscriptions (Paris 1849) and *Inscriptions in the Cuneiform Character from Assyrian Monuments, discovered by A. H. Layard*; the copies by Samuel Birch and Edwin Norris, revised by H. C. Rawlinson (London 1851).¹ While nearly all the publications in the list we have given above reproduced inscriptions written in the Babylonian writing, except numbers 30, 34, 40, and 46, the Khorsabad and Nimrûd finds brought to light inscriptions written in the Assyrian script.

¹ King names and royal titles from the Nimrûd Inscriptions, see A. H. Layard, *Nineveh and its Remains* . . . II (1849), pp. 193–200.

CHAPTER III

THE DECIPHERMENT OF THE CUNEIFORM WRITING

A. The Old Persian Inscriptions.

§ 1. As has previously been mentioned (see pp. 56 ff.), the cuneiform inscriptions of western Asia were first described by Don Garcia (1620), Pietro della Valle (letter of 5.8.1625), and Thomas Herbert (*1638, †1677). Don Garcia at the same time pointed out that the cuneiform inscriptions of Takht-i-Jamshid dated from the time of Darius Hystaspis, seeing that, according to Diodorus Sic. XVIII 70–72, the ruins in which they were found must be those of Persepolis. A starting point had thus been obtained for the understanding of this strange kind of writing. The language it reproduced must be Old Persian. What is of interest to us here is solely the Assyro-Babylonian cuneiform writing, which for chronological reasons is primary as compared with the Old Persian script. But for its decipherment it was necessary that the enigma of the Persepolitan inscriptions should be solved. In the latter half of the eighteenth century J. J. Barthélemy (1762), J. de Beauchamp (letter of 20.10.1786, publ. 1913, see p. 49, and Fr. Münter (1800) called attention to the similarity of the Persepolis inscriptions to the characters on Babylonian baked bricks found near Hillah on the site of the ancient ruins of Babylon, an observation which was to have far-reaching consequences, and which was confirmed by C. J. Rich in 1811. But the decipherment of the Assyro-Babylonian cuneiform writing is inconceivable without the support afforded to research by the insight into the Old Persian cuneiform script.

The Persepolitan inscriptions became the natural focus of the investigations. It was of extreme importance that one of the very first observers of these, Pietro della Valle, with great acumen established the fact that the script must be read from left to right (letter of 21.10.1621). Niebuhr (1778), O. G. Tychsen (1798), and Fr. Münter (1800) adopted the same view which, since the year 1800, has only once been disputed, though

not with success or for the advancement of the investigator (Lichtenstein 1801).

The next observation of importance was due to C. Niebuhr (1778), who ascertained that the Persepolitan inscriptions contained three kinds of script, called by him I, II, and III, and probably represented three different languages. Script I seemed to be the simplest kind of writing, composed of an alphabet of 42 letters;¹ we now know that nine of Niebuhr's characters (including the "word divisor", the sign serving to separate words) are not letters. Niebuhr's observation was accepted by O. G. Tychsen (1798) and Fr. Münter (1800) and all later investigators.

This observation puts Th. Herbert's prophetic words from 1677, that the script consisted of "words or syllables" (see p. 61), in its proper light; Herbert's attention had been turned to script III. Compare herewith Georgius Zoëga's sagacious remark: "Quos vero Persepoliticos characteres appellare solent, non videntur esse litterae alphabeticae neque vulgares, sed cifrae quaedam sive notae idearum, iis affines quibus utuntur Sinenses, a solis forsitan Magis usurpatae . . .",² which is also based on the study of script III. Zoëga likewise established that "Persepolitana rudera non videntur antevertere aetatem Darii",³ so that Don Garcia's observation from 1620 should now be generally accepted.

The third important observation we owe to Fr. Münter (published in 1800, but read before the Royal Danish Society of Sciences in 1798). He suggested that Niebuhr I was an alphabetical, II a syllabic, and III an ideographic or hieroglyphic kind of writing. He further put forward the correct hypothesis that the contents of the texts in the three different languages were the same. These languages he regarded as different developmental stages of Persian: Zend, Pehlevi, Parsi. This last conjecture had later to be rejected.

The foundations for a possible decipherment of the texts were thus laid by the discovery of the direction of the script, the three different kinds of writing, one of which was alphabetical and in the Old Persian language, while all three kinds of writing gave the same text. But from this to the final interpretation and reading of the Old Persian inscriptions a period extending from 1798 to 1846 was to elapse, and it may

¹ See Niebuhr, *Reisebeschreibung* . . . II (1778), Pl. 23.

² *De origine et usu obeliscorum* . . . (1797), p. 551¹.

³ *Ibid.* p. 313².

be truly said that for the correct reading of each of the 33 letters the intense study of more than one investigator was often required.

The first attempt at deciphering the Niebuhr I inscriptions took place in 1798, but before we briefly present the various attempts at a solution we must mention two aids to a further penetration into the inscriptions. I am here thinking of A. H. Anquetil-Duperron's translation of the Avesta (1771) and A. I. Silvestre de Saey's translation of the Pehlevi inscriptions at Naḵsh-i-Rustam (1793, read already in 1787 before the Académie des Inscriptions). Up to 1771 the religion of the ancient Persians was only known from Th. Hyde's *Historia religionis veterum Persarum* (1700, ²1760), in which the author had with great learning gathered together partly the fragmentary accounts of Greek and Roman authors, partly conjectured evidence of Mohammedan authors, and other peoples living in Asia at a later date. After a stay of 7 years in India (1755–62) A. H. Anquetil-Duperron returned to Paris with invaluable Avesta manuscripts, and in 1768 published in *Mémoires de l'Académie des Inscriptions* XXXI¹ two papers (read in 1763) on the ancient language of the Persians (Zend, Pa-zend, Pehlevi, Parsi, and Deri), and in 1771 appeared his famous *Zend-Avesta, ouvrage de Zoroastre . . .*, which besides various fragments gave a complete translation of Vendidad. Of the greatest value to cuneiform research was the *Vocabulaire Zend, Pehlevi et François* published in II, pp. 432–75.² That this source of knowledge of Old Persian was also to prove misleading, once Eugène Burnouf's *Commentaire sur le Yasna* in (1833–(35)) had afforded real insight into the Avesta language, can be established with certainty, but Anquetil-Duperron's *Vocabulaire* and his Zend form Gustasp³ for Hystaspes were an important aid to future decipherments. In *Mémoires sur diverses antiquités de la Perse . . .* (1793) A. I. Silvestre de Saey performed the fine feat of reading and translating Naḵsh-i-Rustam's Pehlevi inscriptions aided by the corresponding Greek ones. They were very badly preserved but restored by him. The inscriptions, like those at Persepolis, were engraved above the sculptured representations of kings, and they were found to contain the royal name and title e. g. . . . Ἀγρ[αξ]αρον[βασιλέως] βασιλέων which title he read in Pehlevi as *malkan*

¹ Translated by J. F. Kleuker II, pp. 29 f. In his translation of 1776 of Anquetil-Duperron's *Zend-Avesta* (1771).

² Cp. that Kleuker in *Anhang zum Zend-Avesta* II 2 (1783), pp. 3–28, gave a characterisation of Zend and Pehlevi, besides brief glossaries.

³ *Zend-Avesta* I 2, p. 61¹; II, p. 71.

malka, "rex regum, King of kings". The inscriptions date from the beginning of Sassanian times: Ἀρταξαρς = Ardashir I, Σαρ[ορ]ος = his son Shapur I (241-72), as pointed out later by C. Fr. Chr. Hoeck.¹ But in the hands of a genius this royal title, hitherto only known from the Sassanids was to become of the greatest significance for the decipherment.

§ 2. In *De cuneatis inscriptionibus Persepolitanis lucubratio* (1798) Oluf Gerhard Tychsen gives no explanation of how he has arrived at the phonetic or alphabetic values given in Table I, but posterity has had to admit that the values for four of his 24 characters: *a*, *u*, *d*, and *s* are correct for Nos. 21, 24, 36, and 38 of Niebuhr's list², even though we now know: *d* before *u*, and *sh* before *a*, *i*, *u*. Tychsen starts from Niebuhr G and B (Lehrun 132) in his decipherment, and transliterates Niebuhr A, H, I, as well as Lehrun 131; he makes two correct observations: the establishment of a constant group of 7 cuneiform signs recurring four times, and the discovery of the fact that one of the signs is not of a phonetic nature but must be regarded as a stop serving to separate the words. "Quaelibet dictio puncto, quod obliqui cuneoli sinistram versus vergentis figuram refert saepius distinguitur . . ."³ As, however, only four of the alphabetical letters of the inscriptions are correctly divined, a transliteration and translation can only prove very strange; to this must be added the fact that Tychsen reads the groups of the seven cuneiform signs as *osch Aksak*, "is (est) Aksak", which Aksak he identifies either with Arsakes I (c. 250 B.C.) "aut unus e successoribus".⁴ This places the inscriptions, despite previous correct observations, (see § 1), in the Parthian time, in spite of the information found in classical authors (Ctesias, Aelian I 59, Arrian VI 29) that the Achaemenians ruled in Persepolis and Pasargada. As to the language, Tychsen, relying on Justinus XI.1, II 3: *Sermo his inter Scythicum Medicumque medius, et ex utrisque mixtus*, regards it as a mixed language and mentions as the chief elements Median (= Zend), Pehlevi, Armenian, Scythian, and Sanskrit; his knowledge of Zend Tychsen derives from Anquetil-Duperron's *Vocabulaire* (see p. 96) and *Table des Matières*.⁵

¹ *Veteris Mediae et Persiae monumenta* (1818), p. 36 f.

² See above p. 73.

³ *De cuneatis* . . . p. 24.

⁴ *Ibid.* p. 19.

⁵ *Zend-Avesta* II (1771), pp. 621-810.

In the same year 1798 Frederik Münter submitted to the Royal Danish Society of Sciences two papers on the Persepolitan inscriptions, which were published in 1800 and entitled *Undersøgelser om de persepolitanske Inscriptioner* (Investigations on the Persepolitan Inscriptions).¹ Münter, whose clear conception of the nature of the cuneiform writing, which he also called the arrowheaded writing (Pfeilschrift) we mentioned in § 1, unlike Tyehsen is convinced that they are the royal inscriptions of the Achaemenian Dynasty. He does not venture to transliterate or translate texts, he merely thinks he can recognise some few characters. His method is twofold: partly he tries by the frequency with which the signs are employed, to point out vowels (one is correct: *a* or *e*, also the most frequent in the Zend language), partly he compares the cuneiform signs with the known alphabets of languages such as Zend, Pehlevi, Armenian, and Georgian; that the latter method happened to give the value *b* correctly may be mentioned in passing. Independently of Tyehsen he found the cuneiform divisor and has stated this with considerably more clarity than the latter: "So wie in der Procession auf dem grossen Basrelief eine jede Gesandtschaft durch eine Cypresse, diesen nach zoroastrischen Religionsbegriffen geheiligten Baum, von der andern abgesondert wird; so finden wir auch, dass die Wörter in den Inscriptionen durch einen pfeilförmigen Strich, welcher von der Linken zur Rechten schief herunter geht, unterschieden werden: und dieser Strich kann keine andere Bestimmung haben, da er so häufig und regelmässig wiederkehrt . . . Diese Bemerkung ist nicht unwichtig. Sie kann mit der Zeit dazu dienen, das Deciphriren der einzelnen Wörter um vieles zu erleichtern".² As to the seven cuneiform characters that constantly recur in groups, Münter rejects Tyehsen's reading *osch Aksak*, and first thought that here was a proper name, but since none of the Persian kings' names would fit in here it occurred to him that it might be a title, as for instance the most usual one in the Persian empire "the King of kings". "Aber die Worte, mit denen dieser Titel in den persischen Sprachen gegeben werden kann z. B. Schah Schahan, Esere Esersanm, Padischah Padischahan, Kschèed Ksehetranm . . . liessen sich eben so wenig aus den sieben Buchstaben und

¹ Offprint of the *Det kongelige danske Videnskabers-Selskabs Skrivelser for Aar 1800* (Publications of the Royal Danish Society of Sciences for the year 1800) (1801) I 1, pp. 251-292; I 2, pp. 293-348; also published in book form in German 1802.

² German edition pp. 113-14; Danish edition p. 331.

ihren Flectionen bringen".¹ The possibilities being thus seemingly exhausted "ich musste daher auf eine mir von Hrn. Silvestre de Sacy mitgetheilte Vermuthung sehr aufmerksam werden, ob es nicht vielleicht eine Religionsformel enthalte".² This idea, however, did not help Münter to the understanding and reading of the seven characters which he regarded as the key to the whole alphabet: "Soviel ist wohl gewiss, dass dieses Wort für den Schlüssel zum ganzen Alphabet gehalten werden kann".³

It may finally be mentioned that in the same year as Münter submitted his papers and as Tychsen published his *Lucubratio*, another publication could be studied. It was *The Alphabet of the Zoroastrians, or Fire-worshippers, which was introduced in the latter part of the reign of Gushtasp*⁴ (i. e. Darius Hystaspis). Here the characters from the Persepolitan inscriptions (Niebuhr I) were interpreted phonetically by Arabic sound values placed above them. That this attempt at decipherment was without any foundation in fact is a matter of course. We do not know to whom this attempt at a solution was due, but it appeared in a Persian manuscript, the contents of which were communicated to W. Ouseley by John Shore, Baron Teignmouth. As to the dating of the manuscript no information is given; it has 30 pages and contains a collection of sixty alphabets.

The decipherment of Georg Friederich Grotefend (1775-1853) threw open the door to the vast realm of cuneiform research. It forms the firm and reliable foundation for our knowledge of the script of the Old Persian inscriptions. It is true that he stands on the shoulders of his predecessors: Niebuhr's excellent copies; Silvestre de Sacy's formula "(King) X King of kings"; Anquetil-Duperron's Gustasp or Gosh-tasp (the Zend form of Hystaspes), and numerous other Zend and Pehlevi words from the *Vocabulaire* of the latter (see p. 96); and finally Münter-Tychsen's observation of *a* and their wedge divisor, identified among the signs. Nevertheless, his decipherment is just as ingenious as it is simple; he closely compares Niebuhr B and G.⁵ First he considers the cuneiform script in general: there are three types of writing

¹ *Ibid.* p. 126; p. 339.

² *Ibid.* p. 127; p. 340.

³ *Ibid.* p. 125; p. 338.

⁴ In W. Ouseley, *The Oriental Collections* II (1798), pp. 56-57.

⁵ *Reisebeschreibung* ... II (1778), Pl. 24.

all running from left to right, and since Niebuhr I only contains about 40 different characters we must here be confronted with an alphabet. Three of the characters are very frequently repeated; these are vowels, one of them, *a*, has been pointed out both by Münter and Tychsen, others by Tychsen. Since the vowels are so frequent and are often grouped two and two, these circumstances clearly show that the language is Zend. To these correct observations Grotefend adds another of the greatest significance for his decipherment: "Omnes inscriptiones, quarum sensum hucusque perspexi, vel ad Darium vel ad Xerxem pertinent".¹ Grotefend saw that the seven characters which Tychsen read as *osch Aksak*, and Münter for some time supposed to be a title such as "the King of kings", (see p. 98), were too few to represent this title. Two words were required for this, the one of seven letters, and the longer form of the same word that followed it. Once it is realised that the seven signs denote the word "king", it follows that the preceding characters must contain the names of kings. When after this he compared Niebuhr B and G, he found that they began with different words, i. e. the names of two different kings; that the second sign in Niebuhr B was Tychsen-Münter's *a* rendered it probable that the name was Darius. But the ingenious observation which solved the whole mystery was this: the king-name in B is at the beginning of the inscription, that is to say presumably in the nominative. The same name is seen in the third line of G in an altered form: i. e. with a case-ending, followed by the word "king" (the seven characters), likewise in an altered form, that is to say: inflected. Further, since Grotefend knows the characters denoting the genitive plural from the title "King of kings", he can see that the word "king" in an altered form must be the genitive singular. Recalling Silvestre de Sacy's formula of the Sassanian inscriptions (see p. 96), in which the kings state whose sons they are, Grotefend concludes that the king in G here states that he is the son of the king in B. The names Darius, Xerxes, and Hystaspes can now be placed in their proper position, as yet only as signs, in the inscriptions B and G, the signs for "king", "King of kings", and Münter-Tychsen's "word divisor" lending their aid. Further, as regards the sound values for "king" and Hystapes he draws upon Anquetil-Duperron's Zend vocabulary's *Khscheïd* and *Gu/os(h)tasp*; in this way he obtains a number

¹ I: 581 In the edition of Grotefend's original papers, published in 1893 by Wllh. Meyer (see above p. 74).

of alphabetical letters: *g, o, sh, t, a*, (the latter corroborating Münter-Tychsen), *s, p*, and from the name Darius *d, a, r*, and *u*, based on Tychsen (see p. 97). Grotefend could now read "king", the seven signs, thus: *khshē . . o*.¹ Xerxes, the first name in Niebuhr G, was read *khsh-ershe*, the first sign being identical with the first character in "king". That we now read, e. g. *Vishtāspahyā* for Grotefend's genitive singular *Gōschtāspāh*, which was due to Anquetil-Duperron's nominal inflection in Zend from 1768 (see p. 96), shows that his *g* and *o* were incorrect readings, but the total result is nevertheless that to Münter-Tychsen's *a* and Münter's *b* Grotefend has been able to add 8 correct values in the Old Persian cuneiform alphabet: *sh, t, s, p, d, r, u, kh*, besides having clearly understood the main contents of the inscriptions, the names of kings, titles.

In the four papers in all, (see p. 74²), which Grotefend submitted to the Göttingen Academy in the period from September 4, 1802 to May 20, 1803, the first whose contents have been outlined above was by far the most important; as for the publication of his attempts, see above Chapter II, p. 74². Here he showed his genius, the result being the establishment of a number of sure alphabetical values. After the 4. September 1802 he was only able to add two more correct values to the original eight: *f* and *k*, the first on the 2. October 1802, the second (which he had previously read as *z*) when he studied the Murghāb inscription.² If we can thus as a result of Grotefend's decipherment mention 10 of his own and 2 of Münter's values, i. e. 12, or more than one third of the Old Persian alphabet, this must be regarded as an extraordinary achievement, but Grotefend himself was convinced that he had deciphered 29 values, and even, on the 20. May 1803 gave complete transliterations and translations of Niebuhr A (compared with Lebrun Pl. 131) and of the beginning of Niebuhr H and I. The Old Persian word-forms were made up by the aid of Anquetil-Duperron's and Kleuker's Zend and Pehlevi vocabularies, which could hardly be said to be any sound philological basis. And many of his readings and interpretations excited well-deserved ridicule, of which more below.

¹ *a = e*, according to Münter, see above p. 98.

² Before the publication (1821) of Ouseley's copy, made in 1811, Grotefend had received a copy of it through the Director of the St. Petersburg Library; in A. H. L. Heeren's *Ideen . . .* 3. ed. 1815, however, Grotefend reproduced J. J. Morier's Murghāb copy, which was made a couple of years prior to Ouseley's and was published in 1812 (see above pp. 78-79).

And indeed, Grotefend himself felt, in the time around 1815 and particularly after that year,¹ that it must devolve on the orientalists to complete the interpretation of the writing now for the first time made intelligible if he, as a decipherer, had established the values of the sounds. "Ich bemerke nur noch, dass man, wenn ich das Alphabet der ersten Persepolitischen Schriftart entziffert zu haben, mich rühme, darum keine völlig befriedigende Erklärung derselben von mir zu fordern berechtigt ist, wenn gleich nur allzuhäufig der Entzifferer mit dem Interpreten verwechselt zu werden pflegt. Wenn ich, der orientalischen Sprachen beinahe völlig unkundig, bloss durch ein logisches, auf die Vergleichung aller verwandten Inschriften und auf die verschiedenen Combinationen ihrer Charaktere sich stützendes, Raisonement den Werth und die Geltung der Zeichen als Entzifferer festgesetzt habe; so ist es hernach, da der Weg einmal gebahnt ist, die Sache der Orientalisten, zur vollendeten Erklärung der lesbar gemachten Schrift das Ihrige beizutragen, und nicht wie so oft geschieht, vom Entzifferer eine befriedigende Erklärung des Entzifferten als Beweis für die Richtigkeit seiner Bestimmung des Alphabets zu fordern; zumal wenn von der Sprache der entzifferten Schrift weder Lexikon noch Grammatik, sondern gleichsam nur einzelne Bruchstücke derselben, bekannt sind".²

Grotefend's fundamental attempt at decipherment: *Praevia de cuneatis* . . . (4.9.1802), was accorded great recognition and attention in the learned world; his two immediate predecessors, O. G. Tyehsen and Fr. Münter, were among the first to approve of them. Further Th. Chr. Tyehsen says: "So unerwartet diese Entdeckung ist, so sehr scheint sie Aufmerksamkeit zu verdienen . . . In der Erklärung möchte noch Manches zu berichtigen seyn".³ And Silvestre de Sacy declares: "Je pense donc que M. Grotefend est sur la voie, qu'il a déjà la valeur de quelques lettres".⁴ At the same time he gives a luminous explanation of the reading of the royal names Darius and Xerxes, and criticises Grotefend's plurality of signs for the same vowel. But an unknown reviewer of the account of Grotefend's 4th paper of 20.5.1803 says:

¹ Compare the difference between Grotefend's number of translations in Heeren's *Ideen* . . . 1815 and 1824.

² Heeren, *Ideen* . . . I 1 (1815), p. 590 f.

³ *Gött. gelehrte. Anz.* 1802, pp. 1481 f.

⁴ A. L. Millin's *Magasin encyclopédique* V111, année, t. 5 (1803), p. 466.

"Les premiers essais de M. Grotefend, sur la première sorte d'écriture à coins à laquelle il s'est borné, ne vont pas plus loin".¹ And after Grotefend, as already mentioned, with too great boldness had undertaken the transliteration and translation of virtually all the Old Persian cuneiform inscriptions, Silvestre de Sacy writes in a letter to W. Dorow in 1820: "Quoique les monumens de l'écriture eunéiforme soient en grand nombre, on n'a rien, jusqu'à présent, publié à cet égard qui me paraisse solide et digne de confiance. Je n'excepte de ce jugement ni les conjectures de Mr. Lichtenstein (see below in § 7), ni les travaux de Mr. Grotefend".² Against this may be set C. J. Rich's warm admiration and unwearying helpfulness towards Grotefend, to whom he let Carl Bellino (se p. 81) send the latter's pre-eminent copies of cuneiform texts. And in 1821, shortly before his death, C. J. Rich wrote, after he had copied the Persepolitan inscriptions: "... at Persepolis I copied all the inscriptions except one. I have found much to corroborate Grotefend's system, and have admired his sagacity. The labour I have gone through will greatly assist him."³ It is a fine thing to see the two scholars hold out hands to one another.

In 1822 A. J. Saint-Martin read a *Mémoire relatif aux antiques Inscriptions de Persépolis* before the Académie des Inscriptions (published in 1823),⁴ in which he violently attacked Grotefend's decipherment and offered his own solution of the riddle of the inscriptions instead. He repeats Silvestre de Sacy's criticism in a sharper form: "... les observations de M. Grotefend contenaient tant de choses invraisemblables et arbitraires, qu'il fût bien difficile de reconnaître ce que plusieurs de ces observations avaient de plausible".⁵ He admits "que ce savant aura le premier reconnu les véritables noms des anciens monarques persans qui ont élevé les édifices de Persépolis".⁶ But "les lectures et les interprétations qui en résultent ne doivent plus être considérées que comme des produits de l'imagination".⁷ In the positive part of Saint-

¹ *Ibid.* IX. année, t. 3 (1803), p. 213.

² W. Dorow, *Morgenlaendische Alterthümer* I (1820), p. 57.

³ *Narrative of a Residence in Koordistan* ... II (1836), p. 223.

⁴ Extracts published in *J.As.* II (1823), pp. 65-90; publ. in extenso posthumously in *Mémoires de l'Acad. des Inscr.* XII, (1836), pp. 113-46; Saint-Martin's alphabet, transliteration, and translation of Niebuhr B was reprinted by H. J. Klaproth in *Aperçu de l'origine des diverses écritures de l'Ancien Monde* (1832), pp. 65-67.

⁵ *J.As.* II (1823), p. 69.

⁶ *Ibid.* p. 68 f.

⁷ *Ibid.* p. 70.

Martin's work, the decipherment, the foundations are Niebuhr B and G, Murghâb, and the Caylus vase, for Champollion's reading of the name Xerxes, in Egyptian hieroglyphs, brings this latter memorial into the discussion. However, all the reflections offered by Saint-Martin on these inscriptions date from before 1822, and of the 25 phonetic values he thinks he has deciphered, the correct ones are all Grotefend's. How poor a decipherer Saint-Martin was may be seen from his transliteration of Murghâb's second word as *Houschousch*, which he translates as "Ochus (roi de Perse)",¹ where Grotefend established the name Cyrus with certainty, though without transliteration, it is true. But the correct reading of one sign, and the partly correct reading of another, posterity owes to Saint-Martin. By inserting the Zend form *Vyschtaspo* for Hystaspes instead of Grotefend's *Göschtlâsp* he arrives at the correct value *v*, as well as a *y*, which was not until 1836 given its correct value *i* by Chr. Lassen.

Another two alphabetical values were deciphered before the illustrious two years 1836-37. In the same volume of the *Journal Asiatique* in which Saint-Martin exposes himself to the charge of want of candour, the Dane Rasmus Rask, a linguist of genius, in a letter communicated to Silvestre de Sacy by Frederik Münter² takes Grotefend's part against Sacy's and Saint-Martin's criticism of his vowels. "Par exemple, M. de Sacy, dans sa lettre à M. Millin (see p. 102), sur l'écriture cunéiforme, révoque en doute les trois A et les deux E que M. Grotefend croit avoir reconnus dans cette écriture. On voit à présent que ce doute est sans fondement".³ After this Rask discusses the consonants: "Il me reste aussi des doutes sur plusieurs de ses (i. e. Grotefend's) consonnes, particulièrement sur son génitif pluriel en *êlcháo*, qui ne ressemble point du tout aux inflexions du zend, car en zend tous les génitifs pluriels se terminent en *anam*, *inam*, *ounam* ou *am*, dans les noms impurs, comme en sanskrit et comme en grec . . . et en Latin".⁴ A very important result of this is that the word which Grotefend deciphered as *âkhêotchôschôh*, "mundi rectoris" (e. g. Niebuhr G, last word) is correctly read by Rask as *â.q.a.m.n.ô.s.ô.h*, "Achaemenian."⁵ In this way

¹ *Ibid.* p. 85¹.

² *J.As.* II (1823), pp. 143-50.

³ *Ibid.* p. 147.

⁴ *Ibid.* p. 149.

⁵ *Ibid.* p. 149, see also *Om Zendsproget og Zendavestens Ælde og Ægthed*, p. 251 (*Det skandinaviske Litteraturselskabs Skrifter* XXI (1826), pp. 231-74; German version by Hagen 1826).

the values of two signs, *m* and *n* were secured, so that the number of signs deciphered with absolute certainty were 15 (16) (Münter 2, Grotefend 10, Saint-Martin 1 (2), Rask 2), or about half of the Old Persian cuneiform characters.

An odd curiosity is William Price's fluent translation partly of Lebrun Pls. 132 and 131, partly of two inscriptions he himself had copied at Persepolis.¹ There is no transliteration, nor are any grounds given for the contents or character of the translation; the whole thing is entirely fanciful, having nothing whatever to do with the contents or decipherment of the inscriptions.

§ 3. The years 1836–1837 saw the completion of the decipherment, even though some details were corrected in the decade that followed. A linguistic foundation had been laid for the understanding of the language in which the Persepolitan Old Persian inscriptions were written and its vocabulary. R. Rask, in the work referred to above, *Om Zend-sprogets og Zendavestas Ælde og Ægthed* (1826), gave the first brief scientific sketch of the Zend language, and Eugène Burnouf, in his *Commentaire sur le Yaçna* . . . (1833–(35)) provided the groundwork on which all subsequent research in the Avesta language is based. But at the same time Burnouf carried on the deciphering, taking as his starting point Niebuhr A, Lebrun 131, and Niebuhr I, the inscriptions with the numerous names of nations, lists of satrapies, to which Grotefend had called attention in 1832.² And finally he could add to these a first edition of Xerxes' Mount Elvend inscription at Hamadân which, together with Fr. É. Schulz' Van inscriptions, was presented to Burnouf by the estate of A. J. Saint-Martin after his decease (1832, see p. 84). In *Mémoire sur deux inscriptions cunéiformes trouvées près d'Hamadan* (1836) Burnouf has embodied his results, and if we compare his translations in this with those of Grotefend of 1802–03, 1805, and 1815, we shall see that only now are we confronted with decipherings in which the linguistic problem also has been mastered. As regards the lists of satrapies, containing 24 proper names, not a few were entirely beyond Burnouf's power to decipher, but he tried to read 16, and a later time has shown that 8 of them were correct: Persia, Media,

¹ *Journal of the British Embassy to Persia* . . . also *A Dissertation upon the Antiquities of Persepolis* (1825).

² *Gött. gelehr. Anz.* 1832, p. 122.

Babylonia, Arabia, Cappadocia, Sarangia, Baetria, Sogdiana. To the 15 (16) correct sound values from the previous time, Burnouf could even add two: *k* and *z*, besides a number of other values which posterity has not been able to accept. But Burnouf himself was of opinion that "il ne peut rester de doutes que sur les lettres qui ne se représentent pas souvent."¹

Burnouf's close friend, the Norwegian Christian Lassen (1800–76), who had collaborated with him in Paris in the production of the *Essai sur le pali* (1826), was from 1830 professor of Indian languages and literature at Bonn, a city which among other things on account of his researches acquired the name of the second Benares on a second Ganges. The works of the two friends on the decipherment of the Old Persian cuneiform writing were published in the same year, 1836. In Lassen's *Die Altpersischen Keil-Inschriften von Persepolis. Entzifferung des Alphabets und Erklärung des Inhalts*, the preface is dated May 1836, Burnouf's *Mémoire* . . . was communicated to the Académie des Inscriptions in March. There can thus be no doubt of Burnouf's priority both as regards the first attempt at deciphering Niebuhr I, and as regards the determination of the two new values *k* and *z*. We also know that Burnouf, in the summer of 1835 visited his friend at Bonn and mentioned to him his decipherment of the names of the Old Persian provinces. But everything would seem to indicate that the two friends worked simultaneously and independently of each other, as has been strongly emphasised by Eugène Jacquet, who knew them both: "M. Grotefend . . . a reconnu lui-même l'accord qui existe entre les recherches de MM. Burnouf et Lassen; on doit regretter qu'il n'ait pas reconnu en même temps ce que cet accord de travaux exécutés simultanément et sans communication a d'honorable pour leurs auteurs et de satisfaisant pour la science".² What the two scholars have in common is their concentration on Niebuhr I, and both have read the same sound values *k* and *z*, but to this must be added that Lassen also has a number of correct new sign values and has read correctly 19–20 of the 24 names of nations, where the number of Burnouf's correct readings is 8.

The great advance inaugurated by Rask and Burnouf and continued by Lassen was the close investigation of Grotefend's grammatical forms

¹ *Mémoire sur deux inscriptions cunéiformes* . . . (1836), p. 128.

² *J.As.* III. sér., t. 5 (1838), p. 372.

viewed in the light of Zend and Sanskrit. The result was partly a revision or more precise determination of Grotefend's original 10 signs (see p. 101), partly new conquests, for by virtue of the rich results of his insertions in Niebuhr I Lassen was able to add 6-7 more correct values to those of the preceding investigators. It was the memory of Herodotus IV 87, in which there is an account of the erection of a column at the Bosphorus with an inscription in Greek and Assyrian script, commemorating Darius' Seythian campaign and mentioning the names of the peoples accompanying him, that made Lassen concentrate on Niebuhr I. The results of his studies are outlined above, but of the most central importance for the purely linguistic understanding of the Old Persian texts was Lassen's interesting observation that the various signs allotted to the same letter differ from each other by a modification of sound, and that the vowel *a* is only written with its own particular sign initially, medially in front of *h*, and in front of other vowels, and in all other cases is inherent in all consonants, if not excluded because another group is represented by particular signs: "Ich glaube nämlich erwiesen zu haben, dass der Vocal *a* nur initial, in der Mitte nur vor *h* and vor andern Vocalen ausdrücklich durch ein Schriftzeichen geschrieben, alle Consonanten dagegen inhärrt, wenn er nicht durch ein anderes Vocalzeichen ausgeschlossen wird. Also ein System welches grosse Aehnlichkeit mit dem der Indischen Alphabete hat".¹ The first observation was to be superseded by another explanation in 1846 (see below p. 120).

By Lassen's excellent contributions the decipherings of the Persepolitan Old Persian cuneiform inscriptions had been brought temporarily to an end; Jaquet (see p. 114) and Hincks (see p. 120) call them final. Niebuhr's alphabet (see pp. 73, 95) had been fully covered; nine sound values were, however, still incorrect and this caused uncertainty and misreadings, while further some of Grotefend's and Lassen's values later had to be revised, as will be briefly shown below. On the basis of fresh copies of the inscriptions due to C. J. Rich (see p. 85) and N. L. Westergaard (see p. 86), amongst other places from Naḫsh-i-Rustam, Lassen succeeded in 1845² in reducing the nine incorrect sound values to six.

¹ *Die Altpersischen Keil-Inschriften* ... (1836), p. 16.

² *Die Altpersischen Keilinschriften nach Hrn. N. L. Westergaard's Mittheilungen* (ZKM VI 1845).

§ 4. However, the Persepolitan inscriptions even when eked out by e. g. Murghâb, Mount Elvend, the Caylus vase, were merely short inscriptions with a scant vocabulary in which titles prevailed. For a really thorough penetration into Old Persian and for a chance of fully and conclusively deciphering all the characters a long text with a comprehensive stock of words was required. Such a text was the Bihistûn (Rawlinson: Behistun from Yâqût, the modern pronunciation is Bisi/utun) inscription near Kirmânshâh (see above p. 89), and it was owing to Henry Creswicke Rawlinson's (1810-1895) unremitting energy, extraordinary knowledge of languages, and ingenious powers of combination that this great inscription, deciphered, was submitted to the learned world.

Having been nominated to a military cadetship in the East India Company's service, Rawlinson, in July 1827, after completing his 17th year in April, sailed to Bombay; "he quickly distanced all competitors in the acquisition of Persian and Indian vernacular and in less than a year was appointed interpreter, and, before he was nineteen, paymaster to the 1st Bombay grenadiers, with whom he served five years, and enjoyed great popularity, admired alike as a smart officer, a fine horseman, and a remarkable linguist. From 1833 to 1839 he was employed in Persia, with other English officers, in reorganising the Persian army, and rendered considerable services, not only by raising several excellent infantry regiments among the frontier tribes, but notably by a famous forced ride of 750 miles in 150 consecutive hours, which he made in order to warn the British minister at Têhrân of the presence of the Russian agent Vikovich at Herât".¹ From 1835 to 1839 he was appointed military adviser to the Shah of Persia's brother, who was governor of the province of Kirmânshâh. On the road from Hamadân (Ekbatana) to Kirmânshâh about twenty miles before reaching the latter place, Diodorus Sic.'s *τὸ Βαγιάταρον ὄρος* (II 13), the Bihistûn rock is situated and presents a magnificent appearance, rising in perpendicular form to a height of c. 1700 feet. And cut on the rock are a sculptured bas-relief and a great trilingual inscription from 300 to 400 feet above the ground occupying a prepared surface, 60 by 23 feet. It is true that Rawlinson visited Persepolis in deep snow in the winter of 1833, but there can be no doubt that the impressive sight of the Bihistûn rock together with the Mount Elvend inscription near Hamadân was his

¹ *Dict. of Nat. Biogr.* XLVII (1896), p. 328.

first real meeting with Old Persian culture and its inscriptions. From this time (the spring of 1835) he set himself the aim of copying these inscriptions and, if possible, deciphering them.

Rawlinson tells us himself: "I was at that time (i. e. the spring of 1835) only aware that Professor Grotefend had decyphered some of the names of the early sovereigns of the house of Achæmenes but in my isolated position at Kermanshah, on the western frontier of Persia, I could neither obtain a copy of his alphabet, nor could I discover what particular inscription he had examined".¹ In April 1835 he copied the Mount Elvend inscriptions: "carefully and accurately copied by myself on the spot",² and studying these he succeeded in reading the names Darius, Xerxes, and Hystaspes, a number of sign values being thus gained. In 1835 Rawlinson thought it was the Mount Elvend inscriptions Grotefend had interpreted; his description of how he found the king names by comparing the two inscriptions has the same ingenious clarity as Grotefend's: "These tablets consist of two trilingual inscriptions . . . they are identical, except in the names of the kings, and in those of their respective fathers. When I proceeded, therefore, to compare and interline the two inscriptions (or rather the Persian columns of the two inscriptions . . .) I found that the characters coincided throughout, except in certain particular groupes, and it was only reasonable to suppose that the groupes which were thus brought out and individualized must represent proper names. I further remarked, that there were but three of these distinct groupes in the two inscriptions; for the groupe which occupied the second place in one inscription, and which, from its position, suggested the idea of its representing the name of the father of the king, which was commemorated, corresponded with the groupe which occupied the first place in the other inscription, and thus not only served determinately to connect the two inscriptions together, but, assuming the groupes to represent proper names, appeared also to indicate a genealogical succession. The natural inference was that in these three groupes of characters, I had obtained the proper names belonging to three consecutive generations of the Persian monarchy;

¹ *JRAS* X (1847), p. 5; Rawlinson's treatise, which fills the whole volume, has the year 1846 on the title-page, but the passages cited from pp. 2-13 were written in 1839, see further below.

² *Ibid.* p. 5. Burnouf's publication of Xerxes' Mount Elvend inscription in 1836 (see above p. 83) was not due to Rawlinson's copy, which was first presented to the learned world in 1847 (see below p. 119).

and so it happened that the first three names of Hystaspes, Darius, and Xerxes, which I applied to hazard to the three groupes according to the succession, proved to answer in all respects satisfactorily, and were, in fact, the true identifications".¹ In a note Rawlinson² adds with respect to Grotefend's identification of names: "the process by which he arrived at the identification was nearly similar to that which is here detailed." But it is only right with modification; Grotefend stands on the shoulders of Silvestre de Sacy, Münter, and Tychsen, he makes philological reflections on the difference between the nominative, the genitive plural, and the genitive singular, and he takes these seven repeatedly recurring signs as his last safe clue. Rawlinson, on the other hand, acts promptly like a soldier who makes a sudden attack, but not until he has with penetrative clarity considered all the chances for the success of the attack. Therefore, also, there is no doubt whatever that Rawlinson, quite independently of Grotefend and his forerunners, has deciphered the three Persian royal names that form the basis for every later advance in the decipherment of the Old Persian cuneiform inscriptions.

In the *Transactions of the Literary Society of Bombay* II (1820), pp. 170–193, was published a paper by Charles Bellino entitled *Account of the Progress made in Deciphering Cuneiform Inscriptions*, with two plates, one of which contains Grotefend's deciphered alphabet; the whole paper is a clear and factual report of Grotefend's decipherment, A. H. L. Heeren's *Ideen* . . . (3. ed. 1815, see p. 101²) with the Marghâb inscription being mentioned also. The above-mentioned *Transactions* only appeared in three volumes in the period 1819–23, published in London by Longman, John Murray and others, but copies of it must have been present in Bombay where Rawlinson arrived on the 27th October 1827. The next June, 1828, he was transferred to Ahmedabad where he studied Hindûstâni, and not until the latter part of March 1829 did his regiment return to Bombay. It is from this time that we have Rawlinson's own narrative: "I was educating myself by an extensive course of reading. It is from this period that my passion for books dates".³ From 1830–33 he spent his time in Poonah, Guzerat, and was then, as already stated, removed to Persia. In the "reading period" March–December 1829 he might have studied the aforemen-

¹ *Ibid.* pp. 5–6.

² *Ibid.* p. 6.

³ George Rawlinson, *A Memoir of . . . H. C. Rawlinson* (1898), p. 26.

tioned *Transactions* Vol. II, and it is possible that he did. But as he does not himself mention this paper in *JRAS* X (1847), we must believe him. The explanation is perhaps the quite simple one that only his stay in Persia and especially the deep impression made on him by the Bihistûn rock and its inscription made him interested in the Old Persian language, he having previously trained his fabulous capacity for learning modern oriental languages. The circumstance that Rawlinson in 1839 (see p. 109¹) mentions the Mount Elwend inscriptions as those "which had, in fact, supplied Professor Grotefend with the elements of his original discovery",² shows that he can never have read the above-mentioned paper by Bellino in which Grotefend and Persepolis are inseparably associated.

In the summer and autumn of 1835 Rawlinson began to copy the Persian columns of the Bihistûn inscription, five in number, and containing in all 414 lines of text. From the 29.11 to the 27.12.1835 he lay ill at Baghdad, but after the 7th January 1836 he made his famous journey from Zohab in Persian Kurdistan, and after passing through Khuzistan, to a considerable part of the then almost wholly unexplored province of Luristan; his account of this journey, written down in 1837, was published in the *Journal of the Royal Geographical Society for the year 1839*, IX 1, pp. 26-116, and in 1840 Rawlinson received the Society's Gold Medal on account of this geographical paper. In the summer and autumn of 1836 he continued the copying of the Bihistûn inscription, and he says: "The collation of the two first paragraphs of the great Behistun Inscription with the tablets of Elwend supplied me, in addition to the names of Hystaspes, Darius, and Xerxes, with the native forms of Arsames, Ariarammes, Teispes, Achaemenes, and Persia, and with a few old words, regarding which, however, I was not very confident, and thus enabled me to construct an alphabet which assigned the same determinate values to eighteen characters".³ We may recall that in Europe, up to 1836, only 15-16 sign values had been deciphered.

As regards Rawlinson's original eighteen deciphered signs, we have above, pp. 109-110, let him describe the method by which he obtained his results himself, but about the details he has never said anything, indeed he has even deprecated enquiry in a note, published in 1847,

¹ *JRAS* X (1847), p. 5.

² *Ibid.* p. 6.

to the reprinted "Memoir of 1839" (see p. 109, note 1): "I am neither able, nor is it of any consequence after the lapse of so many years, to describe the means by which I ascertained the power of each particular letter, or to discriminate the respective dates of the discoveries. I follow the text of 1839, and have no doubt that at that period I could have explained the manner in which I had identified these eighteen characters before I met with the alphabets of Grotefend and Saint Martin".¹

"During a residence at Teherán in the autumn of 1836, I had first an opportunity of becoming acquainted with the labours of Grotefend and Saint Martin".² It was A. H. L. Heeren's *Ideen* . . .³ 1815, and Klaproth's *Aperçu* . . . (1832) which he studied without being very much impressed by their results, "far from deriving any assistance from either of these sources, I could not doubt that my own knowledge of the character, verified by its application to many names which had not come under the observation of Grotefend and Saint Martin, was much in advance of their respective, and in some measure conflicting, systems of interpretation. As there were many letters, however, regarding which I was still in doubt, and as I had made very little progress in the language of the inscriptions, I deferred the announcement of my discoveries, until I was in a better condition to turn them to account".³

In the first half of the year 1837 Rawlinson copied the entire first column, the opening paragraph of the second, ten paragraphs of the third column, and four of the detached inscriptions, altogether about 200 lines of the Persian version, the rest of the year he spent in deciphering, transliterating, and translating the first two paragraphs of the Bihistûn inscription; the fair copy of the manuscript, finished in the winter of 1837, he sent off on the 1st January 1838 to the Royal Asiatic Society, London, where it was received on the 14th March 1838, and on the advice of Edwin Norris, the Assistant Secretary, sent to the Société Asiatique, Paris, in order that Burnouf and his colleagues might

¹ *Ibid.* p. 62.

² *Ibid.* p. 6; Sir Ernest Budge, *The Rise and Progress of Assyriology* (1925), p. 33 dates Rawlinson's firsthand knowledge of Grotefend to the late spring of 1836 through the agency of Colonel J. Taylor, the British Resident at Baghdad, who sent him "a mass of papers" to Kirmānshāh. But elsewhere (*Rise* . . . p. 49) it is at Baghdad during Rawlinson's illness at the close of 1836 that Colonel J. Taylor "put into his hands the alphabets of Grotefend and Saint Martin." Apart from the fact that the two statements in Budge do not agree, it was from the 29th Nov. to the 27th Dec. 1835 that Rawlinson sought medical advice at Baghdad. We therefore keep to Rawlinson's own words.

³ *JRAS* X (1847), p. 7.

discuss the translation. Silvestre de Sacy had died in the same year on the 22nd February. Rawlinson himself says about these deciphered paragraphs: "It is important to observe that these paragraphs would have been wholly inexplicable, according to the systems of interpretation adopted by either Grotefend or Saint Martin; and yet the original French and German alphabets were the only extraneous sources of information which up to that period, I had been enabled to consult".¹

This paper, written in 1837, must therefore be said to contain a decipherment of the Old Persian cuneiform script independent of Grotefend. Grotefend lays the foundation for the deciphering of the Persepolitan inscriptions, the interpretation of which is almost accomplished by the work of Rask, Burnouf, and especially Lassen. But the possibility of a real penetration into the language and the signs was only afforded by Rawlinson's interpretation of the long Bihistûn inscription. The latter, as we shall see, was not published until 1847, but in the period from 1835 to 1837 Rawlinson, independently of the investigators working in Europe, deciphered firstly the Mount Elvend inscriptions, secondly the first two paragraphs of Bihistûn, which were the basis on which his interpretation of c. 200 lines of the Bihistûn inscription rests. Thus Grotefend and Rawlinson share equally the credit for the decipherment of the Old Persian cuneiform inscriptions.

The Société Asiatique in Paris esteemed Rawlinson's paper with the transliteration and translation of the first two paragraphs of Bihistûn so highly that it elected Rawlinson an Honorary Member. And from that moment Rawlinson came into direct contact with cuneiform research in Europe. In April 1838 Burnouf sent him his *Mémoire* of 1836, Jules Mohl forwarded Burnouf's large Yasna commentary of 1833(-35) (see p. 105), and Sir Gore Ouseley, Vice-President of the Royal Asiatic Society, brought Rawlinson into contact with Lassen who in August 1838 sent him his deciphered alphabet. Edwin Norris let him have copies of Niebuhr, Lebrun, and Ker Porter's Persepolis inscriptions and further, by correspondence in the years 1838-50, kept Rawlinson abreast of everything concerning European cuneiform research; to this may finally be added Rawlinson's own correspondence with Lassen and Burnouf. Through them Rawlinson was amongst other things made acquainted with Jaequet's valuable contributions to a further understanding of the Persepolitan alphabet. Niebuhr, *Reisebeschreibung* . . .

¹ *Ibid.* p. 7.

II (1778), Pl. 23, enumerates 42 signs, including the "word divisor", but in the succeeding time it was realised that this list of signs could be reduced to 33, to which must be added two new ones not found in Niebuhr's list.

Eugène Jacquet, who died in 1838 only 27 years old, was one of the most eminent linguistic talents France has ever produced. Already at school he had mastered the classics, as well as ancient history, geography, and literature, to the astonishment of all; after that he became a master of such different languages as Sanskrit, Arabic, Persian, Turkish, and Chinese, besides the various spoken languages of India, the Malay Archipelago, Java, and Ethiopia. He was familiar with most European languages, including Danish and Portuguese. At the age of 18 he began to contribute regularly to the *Journal Asiatique*. Among his articles may be mentioned those on the Philippine alphabet and on the languages of Polynesia. His interests had brought him into contact with James Princep, who had deciphered the Pali alphabet, and Jacquet collected material for a *Corpus Inscriptionum Indicarum*, besides eagerly studying Bactrian and Indo-Scythian numismatics. The history and literature of Buddhism was one of his main interests, and in his spare time he translated Chinese or Sanskrit texts concerning Mahâyâna. At the age of 20-21 he translated from the Danish and reviewed R. Rask's work *Singalesisk Skrifflære* (Kolombo 1821).

His contribution to the decipherment of Persian cuneiform script was left incomplete. Three papers were published before, a fourth after his death.¹ In the form of a review of Lassen's book of 1836 he introduced two important corrections in the alphabet: Niebuhr No. 27, which Grotefend and Lassen read as *h*, Jacquet read correctly as *y*, and Niebuhr No. 41, for which Grotefend has the value *a*, Lassen *a* and *ng*, Jacquet gives its correct value of *h*. These new correct readings were of great importance for a further linguistic insight into the texts, but in addition Jacquet contributed 3 correct emendations of Lassen's 9 incorrect sound values (see p. 107), namely Niebuhr No. 10: *v*; 16: *ch*, *c*; 26: *th*, besides giving better grounds for Lassen's reading of Niebuhr No. 40 as *r* (before *u*). It may be mentioned that E. F. F. Beer² simultaneously with and independently of Jacquet determined the sound values of *y* and *h* correctly. By Jacquet's extraordinary con-

¹ *J.As.* III sér., t. 5 (1838), pp. 351-76, 422-45, 544-606; t. 6 (1838), pp. 385-425.

² *Allgemeine Literatur-Zeitung vom Jahre 1838* (Halle), pp. 1-47.

tribution the unknown sound values in the Persepolitan alphabet were reduced to 4. In 1845 A. Holtzmann¹ determined Niebuhr No. 19 correctly as *d* (before *i*); the remaining three were identified by Rawlinson (one of them independently by Hincks) in his Bihistûn publication (1847).

When Rawlinson had, through scientific publications and correspondence, become acquainted with the results of the researches on the Persepolitan cuneiform inscriptions, he proceeded in his leisure hours during the period after April 1838, to January 1839, to the decipherment, interpretation, and translation of about 200 lines of the Bihistûn inscription. Mary Rich, in the posthumous edition of her husband's narratives of his journeys to Babylon and Persepolis, mentions in her preface which is dated the 12th January 1839 "Major Rawlinson, an English officer in Persia, who thinks that he has deciphered an inscription of great length recording the conquest of Darius the Younger."² This testimony we can compare with Rawlinson's own account. In *JRAS* X (1847) we find a verbatim reprint on pp. 2-13 of the introductory "Memoir of 1839" which was to accompany the Bihistûn translation (but the marginal notes date from 1844-46, see below p. 117⁴).

During his preparation of the translation of the 200 lines, a gigantic achievement by an officer on active service whose time was often occupied with interminable conferences at Tehrân, whither he was constantly travelling from Kirmânshâh, Rawlinson mentions in his "Memoir of 1839" that his principal aids supplementing his own 18 deciphered signs from 1836 (see p. 111) were Burnouf's *Yasna* commentary and his knowledge of Burnouf and Lassen's tentative decipherment of Niebuhr I. About the *Yasna* commentary he says, showing his sure linguistic instinct: "To this work I owe in a great measure the success of my translations; for although I conjecture the Zend to be a later language than that of the inscriptions . . . yet I believe it to approach nearer to the Persian of ante-Alexandrian ages than any other dialect of the same family, except the Vedic Sanskrit . . . also, I acquired through the luminous critique of M. Burnouf an insight into the peculiarities of Zend expression, and by this means obtained a general knowledge of the grammatical structure of the language of the Inscription

¹ *Beiträge zur Erklärung der persischen Keilinschriften* (1845), p. 78.

² *Narrative of a Journey to the Site of Babylon in 1811 . . .* (1839), p. VII.

tions . . ."¹ Of Niebuhr I² he writes: "The enumeration of the provinces tributary to Darius Hystaspes I found to be in greater detail, and in a far better state of preservation in the Persepolitan inscription (i. e. Niebuhr I) than in the corresponding list which I had obtained at Behistun, and with this important help I was soon afterwards able to complete the alphabet which I have employed in the present translations."³ Thus Rawlinson in 1839, (reprinted in *The Persian Cuneiform Inscription at Behistun: JRAS X 1847*), most loyally acknowledged the debt he owed, after his decipherment in 1836 of 18 alphabetical values (see p. 111), to Burnouf and Lassen for his further understanding of the texts and for his decipherment of the signs. And furthermore, in his famous paper in *JRAS X*, Rawlinson gave a comparative table of the alphabets adopted by the different scholars with the respective dates of discovery attached, showing that Burnouf and Lassen in their original schemes of 1836 had determined the values of most of the characters with approximate accuracy. In the *Athenæum* for the 8.11.1884 he found occasion to repeat this in the most dignified manner for the benefit of Fr. Max Müller's ignorance and baseness, which are incomprehensible viewed in relation to his statement to Rawlinson's brother in 1850 (see p. 122).

"When I wrote the foregoing introduction in the year 1839, it was my intention to have merely published the text of the Behistun Inscriptions, with a running commentary illustrative of such points of philology, history, and geography, as appeared particularly to deserve attention, and I confidently expected that the Memoir in this humble form would be ready for the press before the expiration of the year (i. e. 1839). As I proceeded however with my task the labour grew insensibly on my hands."⁴ It was especially the study of the language which seemed to Rawlinson to require more time and space than could be afforded merely in critical notes; furthermore the historical and geographical conditions presented far greater problems than originally anticipated. "I set to work, accordingly, in the autumn in 1839 to recast the Memoir . . . the progress of the work was necessarily slow . . . and I might still have hoped to publish the Memoir in its

¹ *JRAS X* (1847), pp. 8-9.

² Also published by Ker Porter, *Travels in Georgia . . . I* (1821), Pl. LV a and by Lassen in transliteration in *ZKM VI* (1841), pp. 175-76.

³ *JRAS X* (1847), p. 9.

⁴ *Ibid.* p. 14.

amended form in the spring of 1840, had not circumstances, over which I had no control . . . arrested my inquiries . . . and superseded for a long period the possibility of their resumption."¹ But before these circumstances occurred Rawlinson had in a series of letters dated from Persia, and sent to the Royal Asiatic Society between July 1838 and August 1839, given an account of his labours and exertions in deciphering and translating the cuneiform inscription at Bihistūn. The letters were read by Edwin Norris in the Society on the 4th January 1840.²

These "circumstances" were the Afghan war (March 1838–Dec. 1842). From October 1839 to October 1840 Rawlinson was stationed in India (Bombay); from October 1840–December 1842 he was appointed political agent at Kandahar for Lower Afghanistan. Here he distinguished himself in various ways and he himself raised and trained a body of Persian cavalry at the head of which he achieved such notable distinction in the battle outside Kandahar of May 24, 1842 that he was mentioned in despatches. In August he marched against Ghazni, in the capture of which he took part. He then went to Kabul whence he returned to India in December with "the Avenging Army." Here he remained until besides the companionship of the Order of the Bath he received for his services the post as British Political Agent in Turkish Arabia with a residence at Baghdad, where he arrived on the 6th December 1843, as successor to Colonel J. Taylor.

In the early summer of 1844 Rawlinson set out for Bihistūn, accompanied by Mr. Hester and Captain Felix Jones, R. N., a ride of 1000 miles, the expenses of the excursion, £ 1000, being defrayed out of private means; and aided by them he was able to make a complete copy of the Persian version (414 lines) and the Susian version (263 lines) of the Darius inscription. The task was extremely difficult, as may be seen from Rawlinson's own account.³ Back again in Baghdad, he proceeded to finish the work from which he was taken away in the autumn of 1839 by his participation in the Afghan war. It appears from several passages that most of the fair copy was written the year after, 1845.⁴ In these years of labour from the autumn of 1844 to

¹ *Ibid.* p. 14.

² *Athenaeum* 1840, p. 79.

³ *Archaeologia* XXXIV (1852), p. 74; read 7.3.1850.

⁴ *JRAS* X (1847), p. 9², where Lassen's paper in *ZKM* VI (1845) is stated to have been published "last year", is a marginal note from 1846 (see p. 115).

February 1846, his only stimulus from the outside world was N. L. Westergaard's copies from Persepolis (Niebuhr H and I) and particularly of the Darius inscription from Naqsh-i-Rustam, as well as Lassen's version of the same.¹ Rawlinson praises Westergaard's copies: "I could not but observe indeed that Mr. Westergaard's copy . . . indicated in its superiority over all the specimens of Niebuhr, Le Brun, Porter, and Rich, the immense advantage which a transcriber acquainted with the character and language enjoys . . . I have derived the greatest assistance in my recent labours from Mr. Westergaard's inscriptions . . ."² Rawlinson does not conceal that "the present Memoir in consequence of the great augmentation of material (viz. 414 lines instead of 200) has been rewritten during the present year" (i. e. 1845), but he maintains that "it is, as far as the original materials extended, and in all essential points of grammatical and etymological construction absolutely identical with that which I had brought into a forward state of preparation for the press in the year 1839."³

In February 1846 Rawlinson sent off his manuscript from Baghdad to the Royal Asiatic Society; the great work, 8 folio plates in cuneiform characters plus LXXI + 349 pages, was despatched in batches. Thus Chapter IV, *Analysis of the Persian Inscriptions of Behistun*, is dated 20.4.1846, and the famous *Supplementary Note* (of which more presently) was sent on the 25.8.1846, and received in London on the 8.10.1846. When the Royal Asiatic Society decided to print the cuneiform text with types, it became necessary first to make such types. Edwin Norris designed the cuneiform types which were cut by Messrs. Harrison.⁴ Norris also read the proofs, and since communication between Baghdad and London at that time took 44 days, he was able at his own risk and with the greatest conscientiousness, supported by a thorough insight into cuneiform research, to make several alterations in Rawlinson's transliteration; when Rawlinson in 1847 revisited Bihistûn in order to copy the Babylonian version, he could ascertain that, except in two cases, Norris had been right. Owing to difficulties connected with printing, proof-reading, and Norris's revision, only parts of Rawlinson's work on Bihistûn could be issued in the year

¹ In ZKM VI (1845).

² JRAS X (1847), p. 15.

³ *Ibid.* p. 18.

⁴ Messrs. Harrison's cuneiform types were later used by A. H. Layard, see his *Ninereh* . . . II (1849), pp. 193 ff.

1846. This is the reason why the 10th volume of the *Journal of the Royal Asiatic Society* has 1847 as the year of publication, while Rawlinson's great work which fills the whole volume, has 1846 as the year of printing, because the plates and the first 52 pages were published in this year (see below); a preface from the Society as editor is therefore dated the 7th September 1846.

As far as it has been possible to ascertain, Rawlinson's Persian Bihistûn decipherment was published at four successive dates.¹ (1) The plates plus LXXI + Chapters I–II (52 pp.) before the 30th November 1846;² (2) Chapter III (pp. 53–186) before the 8th May 1847; (3) Chapters IV–V (pp. 187–349) some time later in 1847, the date cannot be ascertained. (1)–(3) constitute *JRAS* X (1847); (4) Chapter VI: *Vocabulary of the Ancient Persian Language* (192 pp.) was published as *JRAS* XI (1849).

In this grand work we admire equally Rawlinson's sovereign superiority in the actual work of translation as compared with all his predecessors, including Lassen, and his linguistic knowledge, all his etymological considerations being firmly rooted in a deep insight into Sanskrit, Zend, Greek, and Latin, into which latter language the 414 lines of the Old Persian text were translated. To this must be added the brilliantly accurate copies of the cuneiform text, and a transliteration which posterity has of course been able to amend in certain details, but which proves Rawlinson to be superior to his contemporaries as a decipherer. Finally it must be remembered that we have not here an edition of short Persepolitan inscriptions that had since 1802 been thoroughly analysed by the acutest scholars of Europe, but an entirely new unknown text of very great length. And further Rawlinson, in Chapter V, gave copies and translations of the Persian cuneiform inscriptions of Persepolis, Hainadân (Mount Elvend), and Van.

But besides all these advantages as compared with all previous cuneiform research, Rawlinson's *Supplementary Note*, sent from Baghdad on the 25th August and received in London on the 8th October 1846³

¹ Cp. A. J. Booth, *Discovery and Decipherment of the Trilingual Cuneiform Inscriptions* (1902), p. 295; Budge, *Rise* ... p. 54.

² Supported by E. Hincks, who says in a lecture delivered on the 30.11.1846: "I have received a copy of the Bistun inscriptions of the first kind" (*TRIA* XXI (1848), *Polite Literature* p. 233).

³ *JRAS* X (1847), pp. 175–86; the *Supplementary Note* concludes Chapter III, published before 8.5.1847 (see above).

contained a quite central linguistic observation which gave an explanation of the various signs allotted to the same letter and which Lassen (p. 107) had tried to explain by phonetic consonantal changes. Rawlinson's ingenious observation is that the consonants were represented by different characters according to their combination with the vowels, e. g. we have no sign for the sonantic dental *d*, but for *da*, *di*, *du*, excluding the cases where we have Lassen's inherent *a* (see p. 107). And as a result of this he could set up a phonetic alphabet in which all the Old Persian cuneiform signs were correctly deciphered and placed in relation to their phonetic character and position before the vowels *ā*, *a*, *i*, and *u*.¹ This solved the last, very decisive, problem concerning the Persian cuneiform script. And it was with justifiable pride that Rawlinson could say in 1850: "... there are probably not more than twenty words in the whole range of the Persian cuneiform records, upon the meaning, grammatical condition, or etymology of which any doubt or difference can be said at present to exist."²

It must here be strongly emphasised that prior to and independently of Rawlinson the ingenious Irish scholar Edward Hincks (1792-1866) had made the very same discovery concerning the difference in the character of the consonants according as they were succeeded by an *a*, *i*, or *u*. On the 9th June 1846 Hincks read a paper in the Royal Irish Academy entitled: *On the first and second Kinds of Persepolitan Writing*. The paper was written in May 1846, but was not published until 1848.³ In its attitude towards Lassen's publications Hincks's paper marks the brilliant termination of the troublesome tentative Persepolitan decipherments. He was able to correct three of Lassen's incorrect values, for the first time he deciphered Niebuhr No. 28 correctly as *j* (before an *a*), and had only 4 incorrect values in his alphabet. Further, he extends Lassen's law of inherence, distinguishing between primary consonants (followed by *a* inherent or expressed) and secondary consonants (followed by *i* or *u*), and lays down the following rule: "... if a primary consonant precedes *i* or *u*, when a secondary consonant existed of the same value as the primary one, and appropriate to that vowel, an *a* must be interposed, either as a

¹ *Ibid.* pp. 185-86.

² *JRAS* XII (1850), p. 403.

³ *TRIA* XXI (1848), *Polite Literature* pp. 114-31.

distinct syllable or as a guna to the vowel."¹ If we consider Hincks's scheme² with the three vowels, the 19 primary and 11 secondary consonants, of which the latter are deciphered according to the position of the consonant before *i*, *u*, and *r*, we realise that his reasoning centres on the fact that the consonants were represented by different characters according to their combination with the vowels, but that Rawlinson has expressed this more clearly, in a more perspicuous way and has included consonants before *a* in his scheme. But Hincks's reasoning reveals a much finer phonetic understanding, pointing forward towards modern linguistics, while Rawlinson works according to the etymological method of his time, but at the same time ingeniously and simply, with convincing correctness, puts his finger on the right point.

Finally it may be mentioned that one of Lassen's disciples, the 22-year-old German scholar Julius Oppert, one of the founders of Assyriology, who from 1847 settled in Paris and after that published everything in French, in his paper *Das Lautsystem des Allpersischen* (Berlin 1847) propounds a theory parallel to Rawlinson and Hincks's consonant + vowel theory. Simultaneously he subjects the vowel system to a searching examination, in several cases taking an independent position in relation to Lassen and Rawlinson, besides suggesting that the sign for Rawlinson's aspirating nasal *n* should be read *l*. In the French enlarged version of Oppert's sagacious paper³ he has finally tabulated his conception of the interpretation of the signs; he seems to have arrived at his conclusion independently of Rawlinson and Hincks.

The contents of Hincks's epoch-making lecture of the 9th June 1846 concerning the interpretation of the Persepolitan inscriptions, were communicated in a letter containing a detailed account, sent by Edwin Norris to Rawlinson at Baghdad on the 20th August 1846; five days later, on the 25th August 1846,⁴ Rawlinson dispatched his *Supplementary Note* (see p. 118) which contained the same discovery as Hincks had made. As communication between Baghdad and London then took 44 days, it is excluded that Rawlinson can have received any impulse from Hincks's observations, nor does Rawlinson in any place

¹ *Ibid.* pp. 117-18.

² *Ibid.* p. 120.

³ *RArch.* V. année (1848), pp. 1-12, 65-77.

⁴ Cp. the report of the meeting in the Royal Asiatic Society 5.12.1846, where Norris read Rawlinson's note (*Athenæum* 19.12.1846, p. 1302).

mention his debt to Hincks on this point.¹ But it must not be forgotten that Hincks, on the basis of the far more meagre contents of the texts from Persepolis, was able, independently of Rawlinson, to make such a penetrative discovery as regards the Old Persian cuneiform script. As an ingenious linguist Hincks always remained Rawlinson's superior, as we shall presently see again, but as a decipherer, translator, and commentator of the texts Rawlinson remains unparalleled.

Rawlinson received abundant recognition of his grand work on the Bihistûn inscription in learned circles, was hailed as another Champollion both in England, Germany, and France. Fr. Max Müller, the most eminent Sanskritist of the time, who had settled in England in 1846 and began the editing of the European editio princeps of the Rig-Veda in 1849, said to Canon George Rawlinson in 1850: "Thanks to your brother we now have as complete a knowledge of the grammar, construction and general character of the ancient Persian language as we have of Latin."² And at Rawlinson's death in 1895 Jules Oppert, who, as we shall see, published a revised edition of all the Achaemenian inscriptions, said (communicated by Henri Cordier): "Il est permis de dire qu'après Rawlinson, il n'y avait plus qu'à glaner dans la traduction de la tablette perse de Behistoun."³

The works published immediately after 1846(-47), by Ferdinand Hitzig, *Die Grabchrift des Darius zu Nakschi Rustam* (1847), and by Theodor Benfey, *Die persischen Keilinschriften mit Uebersetzung und Glossar* (1847) appeared too late to derive any benefit from the linguistic conquests in Rawlinson's brilliant publication. The later publications were new text editions often amended in the light of the steadily growing insight into the Old Persian language. We must, however, first mention the extremely thorough revision not only of the Bihistûn but also of all the Achaemenian inscriptions issued by Jules Oppert during the years 1851-52 in *Journal Asiatique*,⁴ published separately as *Les Inscriptions des Achéménides . . . éditées et commentées* (1851). In this he made a number of alterations both in the translation and the transliteration the greater part of which posterity has accepted, and Oppert can be said to be the man who created the revised scholarly

¹ Hence Budge's statement in *Rise . . .* p. 53 seems entirely to lack documentation.

² George Rawlinson, *Memoir of . . . H. C. Rawlinson* (1898), p. 165.

³ *Compte rendu des séances de la Société de Géographie. Année 1895* (1895), p. 104.

⁴ *J.As.* IV. sér., t. 17 (1851), pp. 255-96, 378-430, 534-67; t. 18 (1851), pp. 56-83, 322-66, 553-84; t. 19 (1852), pp. 140-215.

Rawlinson text. Oppert himself had the greatest admiration for Rawlinson's achievement, as we saw above on p. 122, and during his critical revision of the Bihistûn publication in 1851 he takes the opportunity of expressing this in the following words: "Aucun ami de l'antiquité ne refusera ses éloges au militaire courageux et savant, par les soins duquel cet important document a été rendu accessible à ses contemporains. M. Rawlinson a grandement mérité de l'histoire du genre humain."¹ Later text editions were Friedrich Spiegel, *Die altpersischen Keilinschriften. Im Grundtexte mit Uebersetzung, Grammatik und Glossar* (1862); Joachim Ménant, *Les Achéménides et les inscriptions de la Perse* (1872). The ultimate edition of Bihistûn is due to L. W. King and R. C. Thompson in the British Museum publication: *The Sculptures and Inscription of Darius the Great on the Rock of Behistûn in Persia. A new Collation of the Persian, Susian, and Babylonian Texts, with English translations, etc.* (1907), also containing transliterations. In F. H. Weissbach, *Die Keilinschriften der Achämeniden* (1911; VAB III) are given all the Achaemenian inscriptions in the three versions in transliteration and translation.

B. The Susian Inscriptions.

§ 5. All the cuneiform inscriptions of the Achaemenians were trilingual; the preceding paragraphs have dealt with the deciphering of the Persian versions. As early as 1800 Fr. Münter, as stated on p. 95, realised that the second version was written in a syllabic script unlike the alphabetical writing of the first. There is no established international nomenclature for the second version, the name for it has varied through the decades as the writing was gradually deciphered and researchers became better acquainted with the language in which it was written. The following appellations have been used, taken in their chronological order:

(1) Median. At a time when the affinities of the language were entirely unknown the name Median had been given to it by Saint-Martin in 1823; Burnouf in 1836; N. L. Westergaard in 1845, see below (2); *JRAS* IX (1848), Proceedings 16.5.1846, p. VIII has: "Major Rawlinson is now engaged in the study of the Median language"; *ibid.* Proceedings 13.5.1848, p. VIII, says "Of the Median monuments we have

¹ *Ibid.* IV. sér., t. 18 (1851), p. 560.

nothing . . .'; Rawlinson, *JRAS* X (1847), p. 228; Hincks, *TRIA* XXI (1848), *Polite Literature* p. 115 note. See below (8).

(2) Scythian. N. L. Westergaard, *On the deciphering of the second Achaemenian or Median species of arrowheaded writing* (1845, see p. 86), p. 433, declares: "I shall abstain here from all remarks on the structure of the language . . .", but his transliterations and grammatical parallels, for instance with Georgian and Turkish (e. g. *ibid.* p. 318), inclined the scholars of the following period to regard the language as a member of what we now call the Ural-Altaic languages (sub-groups are Turkish, Finno-Ugrian, including Magyar, Mongol, Manchu).—At the time here dealt with, however, other less systematic and precise terms were used, e. g. Scythic (a term originating with R. Rask). The Scythians were at that time, owing to the descriptions of ancient authors, regarded as being of Mongolian or Turanian race and language. Thus Rawlinson says in *JRAS* X (1847) p. 201: "I am inclined to think, also, that Scythic would be a more appropriate appellation than Median for the second class of Cuneiform writing." Relying on the authority of the master, Oppert adopts this name (*J.As.* IV sér., t. 17 (1851), p. 541), in the off-print *Les Inscriptions des Achéménides* . . . (1851), p. 103, likewise in *L'Athénæum français* III (1854), pp. 991–93; it was also accepted by Norris (*JRAS* XV 1855), who places the language in the class which he calls Volga-Finnish or Ugro-Tartarian. Oppert in 1851 refers it to the Turanian languages, an earlier appellation, like Scythic, for what is now called the Ural-Altaic languages. F. de Sauley (*J.As.* IV sér., t. 14 (1849); t. 15 (1850)) strongly emphasised the similarities to Turkish.

(3) Elamite. I. Löwenstern, *Remarques sur la deuxième écriture cunéiforme de Persépolis* (*RArch.* VI₂ (1850), pp. 687–728) regards the language of the second version as the dialect of Susa, and employs the designation Elamite; A. H. Sayce, *TSBA* III (1874) p. 467, however, gives up this name in favour of another one; G. Hüsing, *Elamische Studien* (1898; *MVAG* III); F. H. Weissbach in the final edition of all the Achaemenian inscriptions of 1911 (see p. 123).

(4) Sakian. N. L. Westergaard, *Om den anden eller den sakiske Art af Akhæmenidernes Kileskrift* (*Det kongelige danske Videnskabernes Selskabs Skrifter.* V. Række, *Histor.-philos. Afd.* 2. Bd. 1857; read 24.2.1854); the author uses this name to denote the Scythic language, relying on Herodotus VII 64; in reality the name is identical with (2) Scythian.

(5) Medo-Scythie. Jules Oppert, *Expédition scientifique en Mésopotamie* . . . II (1859), pp. 77 ff., where the affinity of the language is determined as "finno-ouraliennne" (*ibid.* p. 82).

(6) Susian. In *Quelques remarques sur les différentes espèces d'écritures cunéiformes* (*L'Athénæum français* III 1854) Oppert maintains the designation Scythian from 1851, but mentions types of script from finds of cuneiform writing in Susa and Mal-Amîr, which he calls respectively archaic Susian and modern Susian (*ibid.* p. 992). Herewith this name came into use, and in 1862 A. D. Mordtmann for the first time used it instead of Scythian, then the sole prevailing name, about the second version of the Achaemenian inscriptions (*ZDMG* XVI (1862), pp. 21-22). Mordtmann based his argument on the order in which the provinces Persia, Susiania, and Babylonia occurred in the Bihistûn inscription, and also pointed out that in "Scythian (Median)" Susa bears quite a different name from that of the Persian version, while the other names are identical in both versions. As regards the name Susian it may be recalled that C. J. Rich (see below p. 136) as well as I. Löwenstern (see (3) above) regarded the language of the second version as a dialect of Susa. I myself have preferred to use that appellation in what follows.

(7). Amardian. A. H. Sayce, *TSBA* III (1874) p. 467 f., who at the same time showed that the language bore a closer affinity to the dialect from Mal-Amîr, the inscriptions of which were copied by A. H. Layard 1841 (see *Early Adventures* . . . I (1887) pp. 403-05, published in *Inscriptions in the Cuneiform Character from Assyrian Monuments, discovered by A. H. Layard* (1851) pp. 31-32, 36-37), than to that of Old or Archaic Susian (see above in (6) on Oppert's distinction between them in 1854); J. Halévy was the only one to accept this name.

(8) Median. Jules Oppert, who had previously used the names Scythian, Medo-Scythie, maintains in 1879 that the language is "un idiome portant quelques-uns des caractères des langues dites altaïques", and since "Les rois Mèdes étaient décidément des Touraniens . . . les inscriptions du second ordre des textes trilingues ne doivent s'appeler ni scythiques ni médo-scythiques mais que le seul nom qui convienne à ce système est celui de médique." (*Le peuple et la langue des Mèdes* (1879), pp. 1 and 28). The theory that the Median kings were Turanians has now been universally abandoned.

(9) Anzanian. A. J. Delattre, *Le peuple des Mèdes* (1883).

(10) New Susian. F. H. Weissbach, *Die Achämeniden-Inschriften zweiter Art* . . . (1890; AB IX) uses this name, probably under the influence of Sayce (see (7) above); in 1911 Weissbach altered his appellation to Elamite. (see (3)).

(11) New Elamite or Chôzian. Hans Jensen, *Die Schrift* . . . (1935), p. 76.

Of this large number of names only Median, Susian, and Elamite have survived down to our day.

As regards the decipherment, the few investigators who engaged in it before Rawlinson's Bihistûn publication had only a very defective material to rely on. It is true that prior to 1846(–47) great progress had been made towards the understanding of the Old Persian cuneiform alphabet, only 3 unknown sound values being left (see p. 115), but the Persepolitan inscriptions as well as that of Mount Elvend were short. However, the deciphered names and titles formed the starting point for all decipherment of the Susian versions.

In his third paper, dated the 13th November 1802, (see p. 74²), Grotefend drew the conclusion that the second Persepolitan type of writing should also be read from left to right, that it was partly alphabetical, partly syllabic, and that the inscriptions corresponded word for word, occasionally letter for letter, and not only in the proper names, to that of the first type of writing; further, that the language possessed suffixes and inflectional endings, and that it was neither Egyptian, Aramaic, or a Persian dialect. And finally, in 1837, Grotefend¹ made the observation which became just as important for the decipherment of the Susian script as the Tychsen-Münter "word divisor" for that of Old Persian. He ascertained that a single vertical wedge was placed before proper names and various other important words; finally he made the correct discovery of the ideogram for "king" in the inscriptions. This important contribution by Grotefend to the decipherment of the second (and also the third) Persepolitan version became of signal importance for all cuneiform research after 1837 and may be co-ordinated with his contribution of 1802. For the basis of all decipherment both of the second and the third version was the proper names, either of Niebuhr I, or after 1846(–47) of the Bihistûn inscription.

N. L. Westergaard, who in 1843 paid a visit to Naksh-i-Rustam, where he was the first to make a copy of Darius' trilingual inscription,

¹ *Neue Beiträge zur Erläuterung der persepolitischen Keilschrift* . . . (1837).

gained a further list of provinces supplementing Niebuhr I from the tomb of Darius (published in 1845 see p. 88). On the basis of these names, relying on Lassen's decipherment of the Old Persian Persepolis version (see pp. 106–107), Westergaard deciphered six vowels (*a, ā, i, e, u, o*) and 18 consonants. However, we must remember that Lassen's Old Persian values were not all correct, and this in some degree affected Westergaard's results, since he accepted all Lassen's sound values. Westergaard established 82 signs in all in the Susian script. Later scholars were able to augment the number to 111; of his results only one vowel (*u*) was subsequently accepted besides four alphabetical signs (*t, kh, s, m*), while 16 of his syllabic values proved to be strictly correct. In his decipherment of the Susian writing Westergaard rightly developed Münter's suggestion that the script was syllabic. However, 15 of Westergaard's other sound values were very inaccurate and brought confusion in the understanding of the text. The result, as the first tentative decipherment of the Susian script, was highly creditable, but as the above enumeration of the correct values shows, compared with a number of 111 signs Westergaard's decipherment could only be regarded as a beginning.

The next advance was made in 1846 by Edward Hineks¹ who in direct opposition to Westergaard said: "I think that there were four vowels, *a, i, u, er*, which this people regarded as a proper vowel; and only five consonants *p, t, k, s*, and *n*; that besides these nine simple sounds, there were characters representing combinations of the five consonants with preceding or following vowels; and that the vowels also formed combinations with each other."² Hence Hineks, like Westergaard, whose principle of decipherment he rejects, accepts the syllabic character of the writing and makes an important observation, viz. that the vowel is never omitted even if it is not always pronounced: "*per.ersa* is simply *persa*, *an.na.ap* is *anap*."³ His transliteration of Naksh-i-Rustam (Darius) and Niebuhr I resulted in a large number of deciphered values,⁴ of which later scholars have only accepted about 45, but none the less it was about half of the signs, and an achievement based on a very defective text material. Of great importance was the

¹ *On the first and second Kinds of Persepolitan Writing*, pp. 125–30 (*TRIA* XX1 (1848), *Polite Literature* pp. 114–31; read 9.6.1846).

² *Ibid.* p. 125.

³ *Ibid.* p. 126.

⁴ *Ibid.* p. 130.

sign for "god" or "heaven", which Westergaard had deciphered as the vowel *a*, but which Hineks read correctly as *an*, originally the Sumerian word for "heaven", also a sign of great importance for the decipherment of the third version. In a paper from the latter part of the year 1846¹ Hineks could add 9 correct values, the publication of Rawlinson's Bihistûn inscription (see p. 119²) helping him to proceed. As regards the language, Hineks was of opinion that it "has no resemblance in its inflexions to any language of the Indo-Germanic family; though in the fact of its having inflexions it agrees with the languages of that family."³

The third contribution was made by Rawlinson. In Col. II § 16⁴ the Old Persian text of the Bihistûn inscription was very defective; his translation here is based on the Susian version. He does not transliterate, but the translation is of great vigour; later research has only found it necessary to alter a single construction, and about this Rawlinson expressly says: "the translation . . . of the fourth clause is doubtful, the Median copy employing in it several words which do not occur elsewhere in the inscriptions."⁵ If we compare Rawlinson's translation done in 1845 (see p. 117) with that of F. H. Weissbach⁶ from 1890, we must again admire the English major's unique ear for languages.

In spite of Rawlinson's Bihistûn publication both F. de Sauley's and I. Löwenstern's tentative decipherings must be regarded as decidedly retrogressive compared with the ground gained by Westergaard and Hineks. In *Recherches analytiques sur les inscriptions cunéiformes du système médique*⁷ F. de Sauley emphasised the close relationship of the language to Persian, without, however, rejecting Westergaard's observation (see p. 124) that certain grammatical forms resembled modern Georgian and Turkish. In his decipherment de Sauley contributed nothing original, the correct readings are derived from Westergaard. On the contrary, as he was not, apparently, acquainted with Hineks's decipherment, he introduced a host of errors, 15 different kinds of signs for vowels; and though he understood that the script

¹ *On the three Kinds of Persepolitan Writing* (TRIA XX1 (1848), Pollte literature pp. 233-248; read 30.11 and 14.12.1846, and then published separately in 1847).

² *On the first and second Kinds of Persepolitan Writing*, p. 129 (see above p. 120).

³ Rawlinson: II, lines 92-98.

⁴ *JRAS* X (1847), p. 228.

⁵ *AB* IX (1890), p. 69: § 28.

⁶ *J.As.* IV. sér., t. 14 (1849), pp. 93-213; t. 15 (1850) pp. 398-528.

was syllabic he deciphered 21 purely consonantic values. It serves no purpose to go into detail here. In *Remarques sur la deuxième écriture cunéiforme de Persépolis*¹ I. Löwenstern, in a criticism of de Sauley's work, contends that the Median language belongs to the Aramaic branch of the Semitic languages. His starting point is thus hardly any better than that of de Sauley. But worse is to come: "j'explique l'existence d'un alphabet de centaines de lettres, et par conséquent d'un nombre considérable de signes pour un seul son."² And while de Sauley rightly maintained the syllabic character of the script, even though he did not apply this point of view very consistently in his decipherment, Löwenstern declares, 'je ne saurais admettre le système syllabique que M. Westergaard a adopté pour cette écriture."³ Niebuhr D, which Löwenstern transcribes "en hébreu et chaldéen"⁴ terminates this quite abortive deciphering attempt.

In the summer of 1844 Rawlinson had, as stated above (p. 117), made a complete copy of the Susian version of Bihistûn. Only after the publication in 1846(—47) of the Persian Bihistûn inscription which was greeted with the greatest approval everywhere, did Rawlinson think of applying for leave from his official position in Baghdad and after 22 years' absence he arrived in London on the 18th December 1849, where he remained until the autumn of 1851, when he returned to Baghdad. In addition to the Susian version he brought with him the Babylonian, and all his thoughts and energies now centred round the decipherment of the latter, and the preparation of its publication. In the late summer of 1851, Edwin Norris (1795—1872), who since 1838 had communicated to Rawlinson in Baghdad the results of European cuneiform research, and who had assisted him at the publication of the Bihistûn inscription in expert wise, was entrusted by Rawlinson with his Susian copy and charged with the preparation of a scholarly monograph: "A short time before the departure of Colonel Rawlinson from England, at the close of last year, that gentleman gave me leave to copy and publish the paper casts which he had made of the Scythic portion of the Behistun Monument of Darius, together with any memoir on the language which I might compile . . . the following paper is the

¹ *RArch.* VI, 2 (1850). pp. 687—728.

² *Ibid.* p. 707.

³ *Ibid.* p. 707.

⁴ *Ibid.* pp. 722—25.

result of my labour".¹ That Norris probably later received other, and more, material from Rawlinson perhaps appears from the annual report for the year 1848 of the Royal Asiatic Society, in which we read: "Of the Median monuments we have nothing; the superior interest excited by the Babylonian and Assyrian remains had induced Major Rawlinson to abandon for a time his labours upon the valuable copies . . . This delay is the more to be regretted, as the Major has made very complete transcripts; and his memoir on the reading and the language is understood to have been near completion."² And it would hardly, we may suppose, have been possible for Norris from the autumn of 1851 to the 3.7.1852, when his *Memoir on the Scythic Version of the Behistun Inscription* was read, to finish this large paper in so short a time unless extensive materials from Rawlinson had been at his disposal.³

Norris' *Memoir* comprises 213 pages, plus 8 plates with cuneiform writing, and 8 transliteration plates. It was published in 1855.⁴ Besides an introduction and a theory of phonetics, in which the decipherment, transliteration, and translation are explained, and a commentary and vocabulary, Norris' *Memoir* also contains an extensive grammatical section of 35 pages, presenting the chief features of the language correctly. How extraordinary was this achievement will appear from the fact that only his translation has received alteration from later scholars. As regards the decipherment of the signs, it has been found later that 57 values were quite correct and 21 sufficiently correct, i. e. 78, while 24 are wrong.

Since Norris' publication it has in the main been the Susian language, not its cuneiform script, that has attracted the attention of scholars. But the construction that Norris had almost finished, the decipherment of the Susian version, was completed by Westergaard and Oppert. The large treatise of 138 pages, which N. L. Westergaard (1815-78) published in 4^o, read on the 24.2.1854, and published in 1857,⁵ did not, owing to the language in which it was written, exert any great influence on later decipherments. But compared with Norris, Westergaard has deciphered 15 new signs correctly, besides giving a clear and often

¹ Norris, *JRAS* XV (1855), p. 1.

² *JRAS* IX (1848), Proceedings 13.5.1848, p. VIII.

³ Cp. also Budge, *Rise* . . . p. 58.

⁴ *JRAS* XV (1855).

⁵ As to the title, see above p. 124.

improved analysis of many of Norris' sound values. From an international point of view it was Jules Oppert (1825-1905) who in 1859 completed Norris' work. He produced a *Syllabaire Médo-scythique*,¹ the foundation of which was a comparison between the Susian cuneiform characters and the Babylonian cuneiform characters known in 1859, as a result of which he could present 83 absolutely correct and 9 nearly correct sound values.

It fell to later research to clear up the details which remained to be elucidated with regard to decipherment, as well as details of grammatical study. There has also been much learned discussion about the affinity of the language. These matters have been rendered obsolete now that we know from the excavations in Susa and finds of inscriptions that the Susian language of the Achaemenians represents the latest development known to us of the writing of the Elamite language, the affinities of which have not yet been definitely established. Such different possibilities as Ural-Altaic (Heinrich Winkler 1896), Caucasian, and Basque have been suggested. As far as the Susian language and the inscriptions written in it are concerned we may mention the two fundamental, and to a certain extent final, works, J. Oppert, *Le peuple et la langue des Mèdes* (1879) and F. H. Weissbach, *Die Achämeniden-Inschriften zweiter Art* (1890; AB IX). Oppert's work is an admirable contribution, the firm foundation on which our knowledge of the Susian language is based.

Of the purely chronological position of the Susian language merely this need be said: during the excavation of the French expedition in Susa, reckoned from the year 1897² two types of script were ascertained through finds of inscriptions, the so-called Proto-Elamite writing, to which Fr. Bork (1905, 1924), C. Franck (1912, 1923) and R. de Mecquenem (*Mémoires de la Mission archéologique en Iran* XXXI: *Mission de Susiane* 1949) have especially devoted attention, and Old Susian (Old Elamite). The former type of writing is an independent branch of the Sumerian script; of the language written in this there is no agreement. The Old Susian script, is equivalent to Old Babylonian, but the language is Elamite, of the affinities of which we have spoken above; of a *Corpus Inscriptionum Elanicarum*, edited by F. W. König, Fr. Bork, and G. Hüsing, a first volume was published in 1926;

¹ *Expédition scientifique en Mésopotamie* II (1859), pp. 71-77.

² See J. de Morgan, *Mémoires de la Délégation en Perse* (1899 ff.).

Middle Susian (Middle Elamite) is represented e. g. by the inscriptions from Mal-Amîr (see p. 125), while the Susian language mentioned in this paragraph is equivalent to New Susian or New Elamite, one of the official languages of the Achaemenians. A side branch of Susian, Chôzian, was a spoken language until about 1200 A.D.

C. The Assyro-Babylonian Inscriptions.

§ 6. The greatest difficulties were met by the scholars when they attempted to decipher the third Persepolitan version of the Achaemenian rulers' inscriptions. Excellent support was afforded by the publication by Rawlinson of the Persian version of Bihistûn, without which the decipherment would probably have been impossible. But this event did not take place until 1846-47. It is merely natural to note that all attempts at decipherment before these years were quite futile. But in addition to the complicated character of the Babylonian script, with a basic substance of about 600 different signs, the initial investigation of this version of the Persepolitan inscriptions encountered the difficulty that the third type of writing, as it was at first called after the pattern of Niebuhr, was not of a uniform character but occurred in different forms. Finally it may be mentioned that hand in hand with and partly prior to the actual decipherment went an animated discussion on the character of the language in which the third version was composed. Therefore, before giving an account of the decipherment, we must first consider the types of script and possible character of the language of the third version.

Around the year 1800, two kinds of cuneiform writing were known, which belonged to the third Persepolitan version: partly the third Persepolitan columns (Niebuhr), partly inscriptions, e. g. on bricks and cylinders from the Hillah area, i. e. Babylon (Beauchamp, Hager, cf. also the Caylus Vase, Caillou Michaux). As previously mentioned in this book (see e. g. p. 94), voices had been raised in favour of a similarity between the third Persepolitan and the Babylonian script, e. g. J. J. Barthélemy 1762: the Caylus Vase equivalent to Persepolis; J. de Beauchamp in a letter of 20.10.1786: the inscriptions from Hillah found by him equivalent to Chardin's Persepolitan ones; Fr. Münter 1800: a number of signs on Beauchamp's baked bricks equivalent to signs in the third Persepolitan type of script; J. M. Kinneir, who visited the Hillah district in 1808 writes about the Babylonian building bricks: ". . . with

a distich of the characters so common at Persepolis, and similar in appearance to the barb of an arrow."¹ C. J. Rich 1813 says about the inscriptions found by himself in Babylon: "The characters of which they are composed resemble the arrow-headed letters found at Persepolis."² This duality of parallel types of writing, Persepolitan and Babylonian was after 1800 extended to comprise several groups, gradually as the Babylonian material grew (e. g. the East India House Inscription, see p. 77), while an Assyrian type of script was established for the first time by G. F. Grotefend in 1820.³ Fresh examples of the Assyrian writing from Nimrūd were contributed posthumously by C. J. Rich without any explanation, he merely says: "the writing larger than that at Babylon".⁴ But its peculiar character as compared with Babylonian became evident to all when Ménant in 1840 published Fr. Éd. Schulz's Van inscriptions.⁵ Botta's Khorsabad inscriptions⁶ established the place of origin of the Van inscriptions in respect of the writing.

At first scholars were uncertain about this variety of scripts which were all, apparently, pre-Achaemenian and represented the language of the peoples of the ancient Mesopotamian civilisation. But in 1818 G. F. Grotefend made his third important observation (see pp. 99 ff., 126) within cuneiform research. He published the following treatise: *Beweis, dass alle babylonische Keilschrift, soweit sie bis jetzt bekannt geworden, ungeachtet aller Verschiedenheiten in der Schreibweise, zu einerlei Schriftgattung und Sprache gehöre*.⁷ This hypothesis, for as the writing was undeciphered and the language unknown it was no more than that, was daring and was subsequently to prove correct, besides, because of its early appearance, exerting an immense influence on cuneiform research. Grotefend's grouping was as follows: (1) Cuneiform texts "in einfacher bab. Keilschrift nach älterer Schreibart, (2) in einfacher bab. Keilschrift nach jüngerer Schreibart, (3) in zusammengesetztere bab. Keilschrift".⁸ And in 1820 (see above), at a time when the term Babylonian script covered all inscriptions found in Mesopotamia, he

¹ *A Geographical Memoir of the Persian Empire* ... (1813), p. 279.

² *Fundgruben des Orients* III (1813) p. 197.

³ See W. Dorow, *Morgenländische Alterthümer* I (1820), Tab. 1.

⁴ *Narrative of a Residence in Koordistan* ... II (1836), pp. 131-32.

⁵ *J.As.* III sér., t. 9 (1840).

⁶ *J.As.* IV sér., t. 2-4 (1813-14).

⁷ *Fundgruben des Orients* VI (1818), pp. 143-62.

⁸ *Ibid.* p. 143 Table.

drew a clear distinction between Babylonian and Assyrian cuneiform writing; the latter he divided into two groups: "mit einfacher" or "mit zusammengesetzter Keilschrift".¹

In the period from 1820–1847, in which latter year Rawlinson's Bihistûn publication was concluded, investigators could then set up the following list of the known Mesopotamian cuneiform inscriptions:

- (1). Babylonian. a. Lapidary², e. g. the East India House Inscription; Beauchamp's and Rich's baked bricks and cylinders.
- b. Cursive, e. g. Caillou Michaux; C. J. Rich posthumous 1839;³ the third Persepolitan column (practically the same as Babylonian Cursive).
- (2). Assyrian.
 - I. Assyrian a. Lapidary, e. g. Botta's Khorsabad inscriptions (see p. 133).
 - b. Cursive, e. g. the Taylor Cylinder (see p. 69); Rich's copies from Nimrûd (see p. 133).
 - II Van (see p. 85).
- (3). Mal-Amîrian: Layard 1841 (publ. 1851), see p. 125.

That the Assyrian cuneiform script conjectured by Grotefend in 1820 did in fact exist was proved by Botta's Khorsabad excavations and the temporary examples of the texts and inscriptions that he published in 1843–44 (see p. 133⁶). And in 1846 Edward Hincks established the following facts: "a fragment of an inscription on a clay cylinder published by Sir K. Porter, which I discovered to contain a transcript of portions of the great inscription of the East India Company; – a most important discovery, as the equivalence of certain cursive and lapidary characters, which bore scarcely any resemblance to one another, was thus demonstrated . . ."⁴ This immensely important observation showed Babylonian Lapidary and Babylonian Cursive to be identical as to the contents

¹ W. Dorow, *Morgenlaendische Allerthümer* 1 (1820), Tab. II.

² Grotefend, *Neue Beiträge zur Erläuterung der babylonischen Keilschrift* . . . (1840), p. 60: "Zierschrift".

³ *Narrative of a Journey to the Site of Babylon* . . . (1839), Pls. 8; 9: 1.

⁴ *TRIA* XXI (1848), *Polite Literature*, p. 243; read 30.11. and 14.12.1846. The starting point of Hincks' central observation was an identification of Robert Ker Porter, *Travels in Georgia* . . . II (1822), Pl. 78 and the East India House Inscription III 15–16. J. Oppert, *Exp. en Més.* II (1859), p. 61 has given Grotefend the credit for this observation, but without foundation.

of the texts, only the ductus was different. In this way Lapidary and Cursive writing came to be distinguished as two different groups. And in this way also the supposition of earlier investigators of the identity of the third Persepolitan writing with the Cursive and Lapidary Babylonian script was definitely proved.

In 1854, after Rawlinson's decipherment had been published (1851) and more cuneiform inscriptions of different kinds had been found, J. Oppert set up the following list of all the scripts of the cuneiform texts then known, except the Old Persian-Achaemenian:¹

- I. 1. The Chaldaean hieroglyphs, i. e. texts approximating very nearly to picture writing.
- II. 2. Archaic Scythic (i. e. Susian); no texts known as yet.
3. Modern Scythic or 2. version of the Achaemenians.
- III. 4. Archaic Armenian; no texts are known yet.
5. Armenian Van inscriptions.
- IV. 6. Archaic Susian, i. e. inscriptions found in Susa.
7. Modern Susian (Mal-Amir etc.).
- V. 8. Archaic Assyrian.
9. Middle Assyrian.
10. Modern Assyrian (Khorsabad, Nimrûd, Nineveh).
11. Cursive Assyrian.
- VI. 12. Archaic Babylonian (e. g. the East India House Inscription).
13. Modern Babylonian (e. g. Caillou Michaux).
13a. Achaemenian Babylonian.
14. Cursive Babylonian.

Now as to the language in the Babylonian inscriptions, as they are usually called in the period before the great excavations began, though, as we saw, Grotefend in 1820 used the term Assyrian about a certain ductus, it is a matter of course that no firm foothold could be obtained until a few conspicuous, constantly recurring words, apart from proper names which provide little information, in Persian monumental inscriptions, had begun to be successfully deciphered. But it is interesting to follow the first faint indications of the right understanding.

In his admirable survey, in the main of Grotefend's tentative decipherments, which Carl Bellino published in 1820 (read 30.6.1818) and which has been mentioned above on p. 82, he concludes that "the

¹ *L'Athénæum français* III (1854), p. 992.

language of the first species of cuneiform writing is Zend",¹ whereas about the third version he says: "But when, on the other hand, we observe cuneiform writing on the remains of Babylon, which are certainly also of a very remote age, we may be easily disposed to consider this writing as of Aramean origin".² It is interesting to see that the same year as Bellino read his paper in the Literary Society of Bombay, his chief at the British Residency at Baghdad says in *Second Memoir on Babylon* . . . (1818) in an "Appendix on Babylonian Antiquities": "The first and simplest species deciphered by Dr. Grotfend is in Zend, the language of Ekbatana; and there are grounds for believing that the remaining ones are translations into the languages of the other capitals of the Persian empire, Susa and Babylon".³ Whether Rich, like Bellino, thought that the Babylonian language belonged to the Semitic group must be left open to conjecture. It is certain, at any rate, that Grotfend, so highly admired by Rich and Bellino, in later years adhered to his view that these Babylonian inscriptions were written in a late Persian language such as Parsi or Pehlevi.⁴ And even after Rawlinson had issued his translation of the third version of Bihistûn and the Semitic character of the language was revealed beyond doubt, Grotfend in 1853,⁵ as appears from his transliteration and translation, shows that he had by no means mastered the problems and language of this version. That nevertheless he contributed now and again to the decipherment we shall see below.

Grotfend at first called the three languages in the Persepolitan inscriptions Zend, Parsi, and Pehlevi while in 1837 (see p. 140) he has the sequence Zend, Pehlevi, Parsi; he therefore regarded the Achæmenians as the inventors of the cuneiform writing, also on the view that the simple and uncomplicated preceded the complex. Unlike him N. L. Westergaard in 1845 propounded the following hypothesis which was due to a perspicacity in harmony with what Rawlinson 6 years later made known to an admiring scientific world. "When and where

¹ *Transactions of the Literary Society of Bombay* II (1820), p. 187.

² *Ibid.* p. 190.

³ See *Narrative of a Journey to the Site of Babylon* . . . (1839), p. 183.

⁴ See e. g. *Neue Beiträge* . . . (1840); in this Grotfend translates p. 57, but does not transliterate, one of Nebuchadnezzâr's ordinary baked brick inscriptions as an invocation to Mithras.

⁵ *Erläuterung des Anfangs der babylonischen Inschrift aus Behistun* (ZDMG VII (1853), pp. 156-61).

this system of arrow-headed writing took its origin is also a matter of uncertainty. To me it seems most probable that Babylon was its cradle, whence it spread in two branches, eastward to Susiana, and northward to the Assyrian empire, from whence it passed to Media and lastly to ancient Persia . . .".¹ Now we know that in its broad features the evolution was as Westergaard intimated, but at that time it was not immediately obvious, precisely because the Achaemenian Dynasty and its culture were at the focus of research, and little was known about Babylonians and Assyrians, this knowledge being mostly derived from the Old Testament and from classical authors such as Herodotus and Ctesias. As we saw above, Bellino was the first to suggest the relationship of the language of the third version with the Semitic languages. And it is characteristic to note how all the decipherers took the same direction, hardly without knowing Bellino's paper and despite Grotefend's steady opposition, and also, I suppose, influenced by the enumeration of the tribes in Genesis X 22, where Aššûr is the son of Shem.

§ 7. It was not until Botta in *Journal Asiatique* 1843-44 reproduced 15 Assyrian Khorsabad inscriptions in his letters to Jules Mohl on the results of his excavations, that the decipherment of the Babylonian cuneiform script actually began. But we must first survey what was available of tentative decipherments on the basis of the Persepolis inscriptions.

In 1801 J. Hager published one of the building brick inscriptions which the same year, at the request of the East India Company dated 18.10.1797 (see p. 66), was sent to London from the Hillah district, i. e. Babylon. A. A. H. Lichtenstein of Helmstadt reprinted this inscription, at the same time trying to decipher it in 1801.² We call to mind that in 1801 no one had any insight into the simplest Persepolitan version, even though, as we saw in § 1, certain essential fundamental features had been observed as regards the general character of the cuneiform writing; Tyehsen's tentative decipherment of 1798 (see § 2) was only concerned with the first version, and the result was that it was written in Arsacid Persian.

¹ On the deciphering of the second Achaemenian or Median species of arrowheaded writing, p. 273 (*Mémoires de la Société royale des Antiquaires du Nord* 1840-1844 (1815), pp. 271-139).

² *Tentamen palaeographiae Assyro-Persicae* . . . (Braunschweigisches Magazin 1801); his paper was reprinted without alterations as an independent book: Helmstadt 1803.

Thus Lichtenstein entered virgin soil, and his attempt was bound to fail since no particulars were available which might serve to elucidate the contents of the third version which again could only be interpreted through the decipherment of the first version. Besides Hager's building brick Lichtenstein also included in his study Niebuhr C, E, and L as well as Caillon Michaux. Though already Pietro della Valle (1621) had guessed that the cuneiform script was to be read from left to right, and Niebuhr (1778), Tychsen (1798), and Münter (1800) had accepted this suggestion, Lichtenstein started from the supposition that it should be read from right to left. The cause of this was that he was struck by the similarity of the cuneiform characters to the Cufic Arabic ones. He regarded the Persepolitan signs as an earlier form of the Cufic script and accordingly assigned the cuneiform texts to the 7-8th century A.D.; the earliest Cufic inscription dates from 691/2 A.D. As to the inscriptions in the third version he regarded an entire group of characters as only one letter, and disregarding all the inconvenient wedges he discovered something which suggested the appearance of a Cufic letter. In this way he was able to build up an alphabet by the aid of which he could read all the cuneiform inscriptions; the language was an old form of Arabic with an admixture of Aramaic elements, and the contents of the texts were partly religious: Hager's text was a prayer, Caillon Michaux was an exhortation, but written in the Armenian language; partly historical, as for instance Niebuhr C in which we become acquainted with the Emperor of China's governor general, Jinghis, son of Armerib.

After this it will be understood that the hope expressed by a reviewer in 1802: "dass Hr. Dr. Lichtenstein zu Helmstädt den Schlüssel der Keilschrift gefunden habe"¹ was not fulfilled. A. I. Silvestre de Sacy declared in a very detailed review: "il y a cependant, ce me semble, de fortes raisons de douter que la découverte de M. Lichtenstein soit réelle".² Lichtenstein's idea was almost repeated in 1840 by Gustav Seyffarth³ for whom the Arabic written alphabet served as a basis of comparison in his attempt to advance the decipherment which was carried through for many signs.

¹ *Gött. gelehrte. Anz.* 11.9.1802, p. 1446.

² Millin's *Magasin encyclopédique* VIII année, t. 5 (1803), p. 452.

³ *Alphabeta genuina Aegyptiorum* ... pp. 124-138, also Tab. IV-VI (*Beiträge zur Kenntniss der Literatur ... und Geschichte des Allen Aegypten* 7. Heft (1840)).

Above, on pages 101-02, 136 we were not able to conceal that Grotefend, who started the deciphering of the cuneiform writing by his ingenious contribution in 1802, lacked the qualifications as well as the skill in deciphering to arrive at any really fruitful results. But from 1814 to his death in 1853 he was deeply engrossed in and constantly occupied himself with the third Persepolitan version. And the series of contributions to a clearer insight which research owes to him on this point will be duly noted in the sequel.

After the English magnificent publication of what has later been called Nebuchadnezzar's East India House Inscription, or Nebuchadnezzar's Black Stone Inscription, in 1803, Thomas Fisher, who made the copy, in 1807 published *A Collection of all the characters, simple and compound, with their modifications, which appear in the Inscription of a Stone found among the Ruins of Ancient Babylon*. As the inscription was unilingual and therefore unintelligible this list of 287 characters was very useful; Grotefend reverted to it again and again in his considerations. As we saw above on p. 133, Grotefend, in 1818, established that the many different kinds of cuneiform inscriptions of the type of the third version, despite a different ductus all represented one and the same script and one language. Further, he pointed out that the third version was syllabic, that the consonants were written differently according to the character of the vowel succeeding them. This observation has nothing to do with Hincks' "Syllabism" to which we shall revert presently. With Grotefend it expressed his belief that in the ultimate analysis the scripts of all three versions were alphabetical. The inscriptions on the building bricks were in Grotefend's opinion magic formulae.

In 1819 it is seen from a report of a paper sent by Grotefend to the Göttingen Academy, *Bemerkungen über eine bisher noch nicht untersuchte Gattung keilförmiger Inschriften*,¹ that Grotefend's knowledge has increased. While the second version is composed of 60 signs, the third version consists of 287 (according to Fisher, see above). None of these figures have proved right. "Gleichwohl sey sie alphabetisch; was dann freylich die Entzifferung, die der V. den Orientalisten überlässt, schwer machen wird".² But through Bellino Grotefend had seen that the texts were no magic formulae, but "Urkunden sind";³ often they are furn-

¹ See *Gött. gelehrte. Anz.* 1819 III, pp. 1950-52.

² *Ibid.* p. 1951.

³ *Ibid.* p. 1950.

ished with cylinder seal impressions, which would seem to indicate the presence of witnesses to the obligation embodied in the contract, the names of these being signed below the seals. In 1820, in a letter to W. Dorow¹ dated December 1819, Grotefend mentions the Babylonian cuneiform script but calls the language Median-Persian; for his varying names for the languages of the three versions see above p. 136. In 1832 (see p. 105) he called the attention of scholars to Niebuhr I with the list of satrapies which became of great importance for the decipherments of Burnouf and Lassen.

In 1837 Grotefend, as already mentioned (see above p. 126), made a most significant observation. He noted the prominence given to proper names in the Susian version by a single vertical wedge, besides discovering the royal sign of the Susian script. This observation he applied to the Babylonian version and by the study of Niebuhr G, the Caylus Vase, and Murghâb he made out the names Cyrus, Hystaspes, Darius, and Xerxes without transliterating them. Further, by means of the sign for the proper names, he was able to divide 8 lines of Niebuhr B and Mount Elvend almost correctly. As regards the language he abandoned his name of 1820 and now called it Parsi. Finally, in 1840 he presented a plate with 16 Babylonian values, of which, however, only 3 were absolutely correct, as a result of collating the four above-mentioned royal names from 28 texts; besides the royal names Grotefend also on this plate collates parallel signs in the East India House Inscription and those found on Babylonian building bricks.² Grotefend did not transliterate but attempted a few translations in the text of his paper; these are given without transliteration and are based entirely on Anquetil-Duperron's *Vocabulaire* (see above p. 96) in the firm conviction that the language was late Persian. The result was fragments of invocations, prayers, and praises; as late as 1853 Grotefend, as we have seen, unfortunately kept to the same paths.

Isidore Löwenstern, *Essai de déchiffrement de l'écriture assyrienne* ... (1845), who was familiar with Botta's letter to Jules Mohl and the specimens of the Khorsabad inscriptions printed therein (see p. 137), proceeded immediately to the decipherment of Botta's Pl. 25 without any aid from the Persian inscriptions, the decipherment of which was

¹ See his *Morgenländische Allerthümer* I (1820), pp. 23-46.

² *Neue Beiträge* ... (1840), p. 65 is seen Grotefend's only correct sound value *a*, and the finding of *p*, *ā*, and *r*, without the values being regarded as syllabic.

far advanced in Europe in 1845. He read the script from left to right and established that the language was Semitic. Basrelief and inscription (Botta Pl. 25) pointed to the conquest of a city. From his study of the Old Testament he knew that the Assyrians, amongst other cities, had captured Asdod, the feat of Esarhaddon. Starting from a resemblance seen by Löwenstern between an Assyrian character and the Hebrew \aleph he made out his presumed *A- \aleph -d-u-d*, and aided amongst other things by Grotefend's *r* (see p. 140²) and the \aleph ascertained before he found the king's name to be *R-s-k*; everywhere in his determinations of the signs it was the similarity to the Hebrew letters (as with Lichtenstein the Cufic) that inspired him in his deciphering. The royal name was read by metathesis as *Sarak*, in Löwenstern's opinion identical with the Sargon of Isaiah XX, and one of the many variants of the name Esarhaddon. Of correct interpretations, on the other hand, it may be pointed out that Löwenstern identified the sign for "king", "great", and the sign for the plural, without transliterating.

We shall return to Löwenstern presently, but it is necessary here to take the attempts to decipher the Babylonian version in chronological order so as to do justice to the various researchers. Edward Hincks, who we saw above (pp. 120-22 and 127-28) made important contributions to the decipherment both of the first and the second versions, was to contribute the supereminent as regards the Babylonian version. In a postscript to his paper *On the first and second Kinds of Persepolitan writing*, he alleges that both Assyrian and Babylonian are languages which have "much in common with the Semitic languages; but some of their roots are common to them with the language of the second Persepolitan writing".¹ Further he identifies the script and language in the Babylonian inscriptions both with Schulz's (Hincks: Schütz) Van inscriptions and the third Persepolitan version. There are similarities between the scripts of the second and the third versions: "In both, some of the characters represent elementary sounds and some combinations. In both, two or more characters are used to represent the same sounds. In both, no vowel is omitted, but vowels and consonants are repeated in two consecutive characters".² On the other hand, the alphabet of the first version has nothing at all in common with the other two kinds of script. He made out the names

¹ *TRIA* XXI (1848), *Polite Literature* p. 131; read 9.6.1846.

² *Ibid.* p. 131.

of Babylon and Nineveh in the inscriptions on bricks but he did not transliterate.

This was only the postscript of a single page, but in his paper *On the three Kinds of Persepolitan Writing, and on the Babylonian Lapidary Characters*¹ he had made further advances. His material was Grotefend's Persepolis inscriptions, Westergaard's Naḫsh-i-Rustam, the Ker Porter fragment of the East India House Inscription (see p. 134) and this inscription itself, as well as a copy of the beginning (see p. 119²) of Rawlinson's decipherment of the Persian version of Bihistūn. The latter was an invaluable help to him, the decipherment of the proper names being the constant foundation for further progress. In the paper Hincks produces a plate,³ the very first relating to the Babylonian version, comprising 76 signs in which those of the third Persepolitan version are paralleled with the identical lapidary characters, in itself a most deserving piece of work. The result was produced by a comparison between proper names in the Persepolitan and Babylonian cuneiform inscriptions, and even more values were determined by comparing different ways of writing the same word. As to the sound values Hincks deciphered the vowels *a*, *i*, *u*, the diphthongs and 21 syllables (vowel + consonant, consonant + vowel) as well as *sar* and *bar*, besides identifying ideograms and determinatives for "and", "son", "great", "earth", "one", "house", "god". And finally, before any one else he read the first Babylonian word that is no proper name: "*a. na. ku* "I", it is clearly phonetic".⁴ Only 12 of his values are incorrect, a brilliant result in a paper of 16 pages. And scarcely a month later, in *On the third Persepolitan Writing . . .*⁴ he increased his list to 95 primary signs, analysed the East India House Inscription to whose 287 signs he added 9, set up values for 199 of these signs by means of the formulation of a short consonantal sound system, and finally he gives three different readings of Nebuchadnezzar's name of which he says: "The correct pronounciation of the name appears to be *Nebekûlûchar*".⁵

These works by Hincks from June 1846–January 1847 mark the

¹ *TRIA XXI* (1848), *Polite Literature* pp. 233–48; read 30.11. and 14.12.1846, and published separately in 1847.

² *Ibid.* p. 244.

³ *Ibid.* p. 247.

⁴ *TRIA XXI* (1848), *Polite Literature* pp. 249–56; read 11.1.1847.

⁵ *Ibid.* p. 256.

first real advance in the decipherment of the Babylonian version and are likewise the foundation on which the succeeding decipherments are based. Hincks' three above-mentioned papers meant the same for the decipherment of the Assyro-Babylonian cuneiform script as those of Grotefend (1802) and Rawlinson (1837, see pp. 111-13) meant for the Old Persian.

In the next and last tentative decipherment of Löwenstern, *Exposé des éléments constitutifs du système de la troisième écriture cunéiforme de Persépolis* (1847) he begins by welcoming Rawlinson's Bihistûn publication with gratitude. He could not be acquainted with Hincks' first and third papers since they were not published until 1848; the second paper, *On the three Kinds . . .* was published separately in 1847, but Löwenstern does not seem to know it. To begin with Löwenstern rejects his deciphering key from 1845, the Hebrew letters, and takes as his starting point 19 Persian proper names which occur in Assyrian texts. The result is quite unconvincing and no plate with sound values is found in the exceedingly handsome printed book.¹ Löwenstern's conclusions are as follows: the script consists of consonants only, without inherent vowels, according to the common Semitic usage. But since the Babylonian version appears to contain exceedingly numerous differing signs (e. g. Th. Fisher counted 287 in a single inscription, see p. 139) compared with the Semitic alphabet, Löwenstern propounds the theory of "les homophones, principe qui, reconnu pour les hiéroglyphes phonétiques, trouve dans l'assyrien une application non moins complète".² Thus we find 7 different signs for *r*, and so forth, for all the letters of the alphabet. Often the number is more than 7, so that e. g. the names of the Achaemenian kings differ greatly in form though they are the same in sound; to this must be added that the number of vowels in Assyrian is much larger than previously assumed; aided by the Old Testament reading of the Assyrian names he reaches a number of 6. The language is called Aramaïe by Löwenstern. There is no real decipherment and the whole thing only results in purely theoretical considerations which have no foundation in facts. By the term "homotypes",³ letters which have only one written form, but can represent

¹ Of interesting details in *Exposé des éléments . . .* (1847) may be mentioned: 1. pers. pronoun is read *han^{ou}kh* (p. 39), "great" *r^{ou}wu* (p. 38), both words are collated with Hebrew.

² *Exposé des éléments . . .* (1847), p. 87, see also pp. 66 f.

³ *Ibid.* pp. 74 f., 100.

several different sounds, he might have been in contact with the future, but he is not; for this concept is in the main created to explain his complicated vowel system and its relation to the laryngeals of the Semitic languages.

After P. É. Botta, as previously mentioned, had published 15 Khor-sabad inscriptions in 1843-44, he subjected these to a purely graphic examination in a lengthy treatise in 1847-48.¹ Posterity benefited by his extraordinarily minute study of the Assyrian characters. Of the total of about 642 signs Botta especially studied the 125 occurring most frequently, together with their variants; he also arranged the signs in 15 groups according to the number of wedges. By these purely graphic studies he established the identity of the third Persepolitan version with the Van and Babylonian inscriptions;² of the 287 signs of the East India House Inscription he first identified 107, later 179 with those of the Khorsabad inscriptions. As regards decipherment, on the other hand, Botta was unable to read, transliterate, or pronounce a single word, but he pointed out the meanings of several ideograms with great certainty, e. g. "king",³ in which word he is certain of an *r*, besides "heaven",⁴ "country",⁵ and several others (see below), as well as the name Nineveh⁶ and the personal pronoun of the first person "I".⁷ As regards the language Botta reserved his judgment since he could not read the language of the inscriptions;⁸ he says, however: "Sans doute, quelques indées favorisent l'hypothèse d'une origine sémitique".⁹ Here he probably thought chiefly of the above-mentioned pronoun. Hincks read correctly the three signs in question, *a.na.ku* (see p. 142), but his paper which was published separately in 1847 was evidently unknown to Botta. Therefore, in June 1847, he writes about these three signs: "Le dernier de ces trois caractères est tout à fait semblable au caractère initial du nom de Cyrus, et il devient

¹ *J.As.* IV. sér., t. 9 (1847), pp. 373-91, 465-505; t. 10 (1848), pp. 121-48, 207-29, 296-324, 444-72; t. 11 (1848), pp. 242-73; published separately as *Mémoire sur l'écriture cunéiforme assyrienne* (1848).

² *J.As.* IV. sér., t. 9 (1847), p. 376.

³ *Ibid.* t. 9, p. 468.

⁴ *Ibid.* t. 10, p. 124.

⁵ *Ibid.* t. 10, p. 214.

⁶ *Ibid.* t. 9, p. 474.

⁷ *Ibid.* t. 9, p. 486; t. 11, p. 272.

⁸ One word he read later: *sar*, "king", see *ItArch.* IV. année, 2 (1848), p. 466.

⁹ *J.As.* IV. sér., t. 11, p. 272.

alors bien facile de voir dans notre mot le pronom hébreu de la première personne".¹ But the ideographic method of writing with single signs does not seem to indicate a Semitic language: "il est impossible de trouver, dans les langues sémitiques, des mots qui puissent s'arranger avec les signes employés pour exprimer les idées de père, roi, ciel, terre, bâtir, protéger, etc.";² in this Botta was perfectly right, the writing was not of Semitic but of Sumerian origin, as was later found out.

Botta's work, which established the identity of Assyrian and Babylonian is complete and well-rounded in itself, full of ingenious observations, correct identifications of meanings, and present a very useful entire review of all the most frequently occurring signs in the Khorsabad inscriptions with their variants, partly in these and in other known inscriptions of the third version. But precisely because a purely graphic investigation was his starting point, the c. 6-7 signs found in his *Catalogue des variantes de l'écriture assyrienne*³ for each of the 125 signs examined gave him a problem to ferret out, since he could not reconcile himself to the theory propounded by Löwenstern (see p. 143) that they were real homophones or signs having identical values. The result of his reflections was brilliant. In March 1848, 21-22 months before Hincks' famous discovery (see p. 151), he writes: "Il y a en outre une autre cause à laquelle on peut attribuer les fréquents échanges de caractères dans l'écriture assyrienne; on peut concevoir que l'écriture a été syllabique, en ce sens, du moins, que chaque consonne était représentée par un signe différent suivant la voyelle dont elle était affectée. On peut supposer qu'il y avait un signe pour le *b*, par exemple, un autre pour *bu*, *bi*, etc."⁴ Whether Hincks has learnt from Botta cannot be decided, but *Journal Asiatique* was a central organ for all oriental studies. Only one thing is certain, as Botta was decidedly a systematist and graphic worker, but not a decipherer he was unable himself to profit by his brilliant divination.

Botta had succeeded in dividing into its words, almost quite correctly, the whole of Louvre's Bull Inscription, excavated by himself; Adrien de Longpérier, previously mentioned in this work (see p. 86) as the

¹ *Ibid.* t. 9, p. 486.

² *Ibid.* t. 11, p. 272.

³ *Ibid.* t. 9, pp. 382 ff.

⁴ *Ibid.* t. 11, p. 246.

editor in 1845 of the so-called Venezia Vase, on the other hand, was able to supplement Botta's ideograms in a quite short paper and to translate, not transliterate, for Longpérier was no more of a decipherer than Botta, the beginning of the above-mentioned Bull Inscription.¹ Longpérier's paper takes the shape of a letter to L. Löwenstern, to whose homophone theory he could not reconcile himself, and was probably published at the close of 1847, since it appeared in the beginning of *Revue Archéologique* IV. année, 2. partie, which covers the period from the 15.10.47 to the 15.3.48, and he could not therefore know Botta's above-mentioned syllabic theory. But he thinks that perhaps the explanation of Löwenstern's homophones is to be found in consonantal changes under the influence of the succeeding vowel. Modestly and, indeed, quite correctly Longpérier says: "je n'ai aucunement la prétention de déchiffrer les inscriptions assyriennes"; nevertheless he has rendered great services to posterity by correctly pointing out the ideograms for "city" and "great", as well as four names of countries and cities: Assur, Amanus, Emesa, Media. His translation of the beginning of the Bull Inscription reads as follows: "Glorieux (est) Sargon (?), roi grand, roi . . ., roi des rois (??), roi du pays d'Assour".²

Above on p. 128 we mentioned F. Caignart de Sauley's unsuccessful attempt to decipher the Susian version. From 1847 to 1855 he published a series of short papers, only the one from 1854 filling some 70 pages, in which he believed he had deciphered the Babylonian cuneiform writing. Joachim Ménant has later asserted³ that de Sauley was Rawlinson's model, the author from whom he "borrowed" 68 of his Babylonian values, and thus he thought he could maintain that de Sauley was the actual decipherer of the third version. Ménant has rendered great services to Assyriology in its first period and has done in France for this new branch of science what Delitzsch later did in Germany. Nevertheless we must believe that some form of national bias has impaired his judgment on this point. The national fight for priority is often too noticeable in the republic of scholars; but to keep to Assyriology, we also often hear it stated that the Germans have founded

¹ *RArch.* IV. année, 2 (1848), pp. 501-07, supplement to this in *J.As.* IV. sér., t. 10 (1848), pp. 362-34.

² *RArch.* IV. année, 2 (1848), p. 504.

³ *Les écritures cunéiformes* . . . (1860), pp. 136-48; *Les langues perdues de la Perse et de l'Assyrie* (1885-86), II, pp. 139-51.

Assyriology, though the first two German Assyriological works were published in 1864 and 1869 respectively by Justus Olshausen¹ and Eberhard Schrader;² Grotefend and Assyriology have nothing to do with each other, as shown in our account above pp. 139 ff., even though he made some interesting observations. In the light of the ensuing account of the history of the decipherment the following quotation, found without any statement of source in F. H. Weissbach's article on Friedrich Delitzsch in *Reallexikon der Assyriologie* II (1938), p. 198, must be regarded as entirely out of place: "der bisher bedeutendste Assyriologe nicht nur Deutschlands, sondern der ganzen wissenschaftlichen Welt".

We take de Sauley's contributions en bloc without inserting the individual papers in their proper chronological order between Hincks' and Rawlinson's decipherment of the Babylonian cuneiform script. In 1847, in a popular guide to the Assyrian museum department of the Louvre³ he adopts Löwenstern's homophone theory and rightly notes that national names and place names are poor guides in a decipherment, since these often change their appearance, both in respect of consonants and vowels, from one neighbouring people to another. The next year he tried to decipher one of the Van inscriptions, Schulz No. 8;⁴ he employed Grotefend's method, inserting in the text the Assyrian royal names known from Claudius Ptolemy's canon.⁵ The result was absolutely negative, amongst other reasons because Schulz No. 8 is written in a non-Semitic language⁶ and only resembles the Assyro-Babylonian version in the script.

In 1849 he collated the names in the deciphered Achaemenian inscriptions with the corresponding names in the Babylonian versions,⁷ the Mount Elvend inscriptions especially being analysed and translated. He divided the words correctly so that he could compare word for word the Babylonian and the Persian version. In this way he arrived

¹ *Prüfung des Charakters der in den assyrischen Keilinschriften enthaltenen semitischen Sprache* (Abhl. d. königl. Acad. d. Wiss. zu Berlin 1864, pp. 415-49).

² *Die Basis der Entzifferung der assyrisch-babylonische Keilinschriften geprüft* (ZDMG XXIII (1869), pp. 337-74).

³ *Revue des deux-mondes* LXVIII (1847), pp. 447-67.

⁴ *Recherches sur l'écriture assyrienne* [1. Mémoire]. *Inscriptions de Van* (1848).

⁵ See G. Syncellus, *Chronogr.* (ed. W. Dindorf) I, pp. 338 ff.

⁶ Schulz Nos. 9, 10, and 11, on the other hand, are the trilingual inscriptions of Xerxes.

⁷ *Recherches sur l'écriture cunéiforme assyrienne* [2. Mémoire]. *Inscriptions des Achéménides* (1849), dated 14.9. 1849.

at ten deciphered values, of which only three (*šī, ri, ša*) were correct, the remaining seven values are incomplete, since de Sauley reasoned alphabetically and consonantally and related his values to the 22 Hebrew letters which were the only ones he used in his transliteration. But how little de Sauley was aware of possible pitfalls is seen by the fact that when the Persian version had exchanged the words "heaven" and "earth" de Sauley in the Babylonian version gave the sign for "heaven" as the sign for "earth", and for "earth" the sign for "heaven". Perhaps it could not easily be detected at that time since the Babylonian words are ideograms written with a phonetic complement, but it is a warning not to use the Persian version as a foundation for the decipherment of the Babylonian. His attempt in the same year to read a fragment of the Babylonian Bihistūn inscription¹ which de Sauley had received from Botta to whom Rawlinson had sent it from Baghdad, in every respect gave a very poor result; the transliteration was in Hebrew letters.

In the third memoir of his *Recherches sur l'écriture cunéiforme assyrienne* (1850),² de Sauley, in 44 pages, without stating his deciphering principle, gives a transliteration and translation of all the Babylonian versions in the Achaemenian inscriptions (minus Bihistūn, which was not published until 1851). This was in so far a great achievement even though the translation was in some degree given, as the Persian versions had been deciphered. Even if de Sauley had a growing suspicion that the Assyrian letters might after all turn out to be syllabic, the 120 sound values which he presents as the result of his decipherment are all regarded as consonantal sounds. De Sauley's adherence to the alphabetical principle, a principle also adhered to by Lichtenstein (1801) and Löwenstern (1845, 1847) made it impossible for him to penetrate deeper into the real character of the script and language. And even though de Sauley, by his ingenious interpretation of the Achaemenian inscriptions, arrived at a series of correct values, having 68 of the 120 in common with Rawlinson in 1851, it should be kept in mind that de Sauley's values are consonants and therefore really all incorrect. This marks the culmination of de Sauley's attempts at decipherment; he had not the intuition and genius of Hincks and Rawlinson to penetrate into this kind of script, perhaps the most complicated of all.

¹ *RArch.* VI. année, 1 (1849), pp. 42-47.

² Dated 27.11.1849.

A brief mention of his last three contributions shows that it is impossible to regard de Sauley as the decipherer of the Babylonian cuneiform script. But it should be emphasised that de Sauley was the first to read the personal and the possessive pronouns, to recognise some few verbal forms, and to erect the units, as regards gender and number, that since proved fruitful, and to open the way to our knowledge that the Achaemenian inscriptions accessible to him were Semitic texts. In 1850 he made a translation, but no transliteration, of a Khorsabad Bull inscription, 85 lines long.¹ After Rawlinson's translation of the Black Obelisk (see p. 155) it was the second long Assyrian inscription to be translated. But posterity can only accept large parts of his translation and wonders at his reading *Sardon* instead of Sargon, which already Longpérier saw was right. In 1852, in a letter to E. Prisse d'Avennes,² he flatly rejected Rawlinson's ingenious polyphony (see p. 154), and his Assyro-Babylonian swan song is his *Traduction de l'inscription assyrienne de Behistoun*³ in which Rawlinson's masterpiece was "improved and corrected", amongst other things by a purely consonantal transliteration of the text; a poor *Lexique de l'inscription assyrienne de Behistoun*⁴ is a supplement to his aforementioned translation.

§ 8. Above on pages 141–143 we mentioned Edward Hincks' pioneer work, the decipherment of the Babylonian version in the period 9.6. 1846–11.1.1847, published in 1848 in three papers in *Transactions of the Royal Irish Academy* Vol. XXI, 1848, the second paper in the series being issued separately in 1847, see above p. 142¹. In his fourth paper, *On the Inscriptions at Van*,² he was able to add 17 correct new values to his deciphered sound values. The proper names caused him great difficulties where he only had the Old Persian phonetic values to rely on; they remained a constant stumbling block during the early years of Assyriology, which only a study of the Assyro-Babylonian syllabaries was able to remove. In 1847 de Sauley (see p. 147) had called attention to the problems. Another of Hincks' difficulties was the vowel we now call *e*; Hincks regarded this sound as a short *ā*, as contrasted with his previously discovered vowel *a*, which he now

¹ *RArch.* VI. année, 2 (1850), pp. 765–72.

² *Revue orientale et algérienne* ... II (1852), pp. 159–68.

³ *J.As.* V. sér., t. 3 (1854), pp. 93–160.

⁴ *Ibid.* V. sér., t. 5 (1855), pp. 109–97.

⁵ *JRAS* IX (1848); read 4.12.1847, also published separately in 1848.

termed long *ā*. In an *Additional Memoir* dated 4. March 1848 he was the first to give a clear and correct analysis of the Assyrian numerals as expressed with cuneiform signs.

In his 5th paper, *On the Khorsabad Inscriptions*,¹ Hincks, by a stroke of genius, created Assyriology as an independent branch of philology, and put the correct conception of the peculiar nature of the Babylonian cuneiform writing in its place. After the contents of this paper were known, only two things were lacking to complete the decipherment: an extensive text with a rich selection of words, and the law of the polyphony of the signs; both of these were furnished by Rawlinson. Hincks now had at his disposal for the decipherment the texts in P. É. Botta's *Monument de Ninive* (1849) and items from the Nimrūd publication issued by the British Museum in 1851.² As a result of this Hincks furnished the first real insight into the nature of the ideograms,³ including the difficult composite ideographical modes of writing.⁴ During this work he kept in view what Löwenstern called "homotypes" (see p. 143) and declared: "It cannot be denied that this double use of characters is a source of great confusion, and that it greatly increases the difficulty of deciphering the Assyrian writing. But if it was really practised, as I consider it quite certain, it must be recognised as a possible source of error, and carefully guarded against".⁵ Cautiously Hincks here considers the possibility of polyphony, but he neither formulates it nor demonstrates it as a law, so that he thus missed the last link in the chain, which would have made the decipherment an accomplished fact. From the 7 lines of which Hincks issued a translation⁶ it appears plainly that the language is Semitic, and Hincks makes a number of correct grammatical observations,⁷ whereas the writing is of quite a different character, according to Hincks of Indo-European origin.⁸ The paper also contains a detailed survey of the history and chronology of the Assyrians compared with that of Egypt

¹ *TRIA* XXII 2 (1850), *Polite Literature* pp. 3-72; read 25.6.1849, with an *Appendix* dated 19.1.1850, and *Addenda* dated 26.2.1850; also published separately in 1850.

² *Ibid.* p. 70; see above p. 93.

³ *Ibid.* pp. 16-32.

⁴ *Ibid.* pp. 24 f.

⁵ *Ibid.* p. 23.

⁶ *Ibid.* p. 70.

⁷ *Ibid.* pp. 71-72.

⁸ *Ibid.* p. 57.

and the Old Testament¹. Hincks was still unable to decipher the royal names correctly² (see p. 149 above); yet now he could almost read Nebuehadnezzar's name correctly as *Nabic-cudurray-uchur*.³

The essential part of the paper, the decisive new thing it set forth, which was of the most central significance for the understanding of the language and script, was Hincks' establishment of the fact that the Assyrian characters are wholly either syllabic or ideographic, no sign representing a simple consonant. The idea was quite natural; 9.6.1846⁴ Hincks had pointed out the resemblance between the Susian and the Babylonian writing, and the Susian writing had been designated by Münter (1800), Westergaard (1845), and Hincks himself as a syllabic script (see pp. 95, 127, 127). It was in the *Appendix* dated 19.1.1850 that Hincks put forward this important discovery in the following words, in which he summed up the results of the paper itself: "It was indeed stated, that there were four vowels; that there was no character denoting a simple consonant, but that characters might represent a consonant with a vowel either preceding or following it; . . . From this it followed, that each consonant might be contained in the values of seven distinct characters having the forms *Cā, Ca, Ci, Cu, aC, iC, and uC*, where *C* represents any consonant; and it was stated that the last two would represent also *yaC* and *vaC*. It was not stated, however, how many values *C* might have, and, consequently, how many series like the preceding existed in the language, nor was it stated what characters belong to each series. In the present Appendix I propose to supply these omissions".⁵ The result was that survey of the deciphered, syllabic sound values which Hincks presented;⁶ it contains 82 values, of which about 40 are absolutely correct, while the rest are more or less approximately right. From purely theoretical considerations Hincks himself put the number at 60: "The characters representing simple syllables containing a consonant followed by a vowel would thus be sixty"⁷ but his own aforementioned list shows a larger number. And to this must be added the compound syllables which Hincks also estab-

¹ *Ibid.* pp. 41-55.

² *Ibid.* pp. 32-41.

³ *Ibid.* p. 33.

⁴ *TRIA* XX1 (1848), *Polite Literature* p. 131; cp. above p. 141¹.

⁵ *TRIA* XX11 2 (1850), *Polite Literature* p. 56, cp. above p. 150¹.

⁶ *Ibid.* pp. 62-64.

⁷ *Ibid.* pp. 57 f.

lished, as will be seen from his translations;¹ seven compound syllables appear in these, the following four being correct: *sib*, *kun* (Hincks: *cun*), *bul*, and *gur*. It appears from his sixth and last paper, read 24.5.1852 (see p. 157), that prior to Rawlinson's Babylonian Bihistûn publication in 1851, he had deciphered some 20 compound syllables.

Hincks' famous paper was read in the Royal Irish Academy on the 25.6.1849, and there can hardly be any doubt that Norris informed Rawlinson in Baghdad of the syllabic point of view presented in the paper. I have no doubt that Rawlinson during his stay in England from 18.12.1849–autumn 1851 (see p. 153) must have become more acquainted with Hincks' "Syllabism" (fully expressed 19.1.1850, see p. 151) and later on accepted it or he could not on more than one occasion have said that "in 1850 Hincks knew more about the languages used in the Bihistûn inscription than anyone else".² Of course this is a very essential point in judging of Rawlinson's decipherment, but if we follow the latter from September 1847 to May 1851, we may safely say that Rawlinson's achievement, despite all that he learnt from Hincks' "Syllabism", evokes even greater admiration.

In September 1847 Major H. C. Rawlinson, spending £1000 to defray the expenses of the expedition, repeated his ride of c. 1000 miles (see p. 117) to the Bihistûn rock, to copy the Babylonian version. Already in the Persian Bihistûn publication he had admirably classified the heterogeneous forms of what was then called Babylonian writing,³ besides taking a survey of Assyrian inscriptions; there he mentioned Botta's 15 Khorsabad inscriptions in which there occurred a number of signs with equivalent sounds,⁴ a result at which Botta himself arrived the same year (1847) when he issued his graphic list of variants (see p. 145). Perhaps Rawlinson, when he wrote his words knew of Botta's planned edition of variants. As regards the Babylonian writing he alleges that the Bihistûn inscription affords the only possibility of deciphering the third version: "... we are indebted to the trilingual inscriptions of Persia for our only key to the decipherment of the Babylonian alphabet" ...⁵

¹ *Ibid.* p. 70.

² Quoted from Budge, *Rise and Progress of Assyriology* (1925), p. 78.

³ *JRAS* X (1847), pp. 21–24.

⁴ *Ibid.* pp. 24–29.

⁵ *Ibid.* p. 24.

Amid incredible difficulties which required both courage, physical strength, and dexterity, of which he tells us in a lecture delivered on the 7.3.1850 in the Society of Antiquaries of London,¹ he managed to take paper "squeezes", the position of the Babylonian version on the rock rendering it impossible to copy it by hand on sheets of paper. These "squeezes" he brought to London with him and during his stay from the 18.12.1849 to the autumn of 1851 he showed them in various learned societies where he lectured, and later he presented them to the British Museum. In 1848 a daring Englishman by the name of Tasker also took a copy of the inscription which was in Rawlinson's possession.²

After his return to Baghdad in the late autumn of 1847 till he left Baghdad to go to England on the 26.10.1849 Rawlinson worked in his leisure hours at the decipherment, transliteration, and translation into Latin of the 112 lines of the Babylonian version. There can be no doubt that Hincks' works of 1846-47 with their deciphered sound values (published 1848, see pp. 141-143) through the agency of Norris were known to him during his decipherment. But what is of decisive importance is that Rawlinson here, instead of using the small Persepolitan and other Achaemenian inscriptions of similar size, tackled the decipherment and translation of a quite new Babylonian text of 112 lines, whose signs and content of words were different from the rest of the Achaemenian texts. And Rawlinson must, before he left Baghdad on the 26.10.1849, alone have deciphered a very full list of signs, or he could never have made his translation. That during his stay in London³ he may have made corrections in his manuscript before the 17.5.1851, when a considerable portion of his *Memoir* had been printed,⁴ is only reasonable to suppose if as a researcher conscious of his responsibility he had become convinced by a closer study of the only considerable contributions before his own, the works of Hincks and Botta, that during his studies in Baghdad he had been in error on this or that point.

However, Rawlinson arrived in London on the 18.12.1849, and a month later, on the 19.1. and 16.2.1850 he delivered some lectures in

¹ Published in *Archaeologia* XXXIV (1852), pp. 73-76.

² See N. L. Westergaard, *Om den anden eller sakiske Art af Akhæmenidernes Kile-skrift* (1857; read 24.2.1854) p. 43**.

³ See above and p. 129.

⁴ See *JRAS* XIII (1852), Proceedings 17.5.1851, p. VI.

the Royal Asiatic Society¹ in which he showed European scholars the results of his own decipherment in Baghdad. We can say so with perfect justice, for at that time, as we shall see, he had not accepted Hincks' "Syllabism". The lectures were published under the title of *On the Inscriptions of Assyria and Babylonia*.² This work shows Rawlinson in all his greatness as the true decipherer of the Babylonian cuneiform writing. Details were reserved for the final publication of the third version of *Bihistûn*. But at this date Rawlinson knew 150 signs³ by decipherment, was able to give an excellent grammatical sketch of the language⁴ on the basis of his Baghdad translations, and thus once for all proved that the language was Semitic: "The observations which I thus made . . . may be considered sufficient to establish the determinate classification of Babylonian and Assyrian as Semitic dialects".⁵ Rawlinson knew 200 of the most important words of the language but admitted that it was only a small part of the 5000 words which the language possessed in his estimation. As regards the writing and the sound values expressed by it, he says, evidently alluding to Hincks, whose "Syllabism" he had not yet accepted: "It cannot certainly be maintained that the phonetic portion of the alphabet is altogether syllabic, or, that every phonetic sign represents a complete and uniform articulation. There is, it may be admitted, an extensive syllabarium, but at the same time many of the characters can only be explained as single consonants";⁶ this latter point of view was abandoned in the final publication of 1851. But a little way further down the page he then sets forth his ingenious discovery of the polyphony of the signs: "A still more formidable difficulty, one, indeed, of which I can only remotely conjecture the explanation, is, that certain characters represent two entirely dissimilar sounds,—sounds so dissimilar, that neither can they be brought into relation with each other, nor, even supposing the sign properly to denote a syllable, which syllable on occasion may be compressed into its dominant sound, will the other part be found to enter at all into the full and original articulation".⁷ While Hincks' Babylonian "Syllabism" is conceived in con-

¹ Report of the meetings, see *Athenæum* 1850, pp. 101-05, 234-36.

² *JRAS* XI (1850), pp. 401-83; dated 1.3.1850.

³ *Ibid.* pp. 403-04.

⁴ *Ibid.* pp. 407-416.

⁵ *Ibid.* p. 414.

⁶ *Ibid.* p. 405.

⁷ *Ibid.* p. 405.

tinuation of experience gained from the decipherment of the Susian version (see p. 151), Rawlinson's ingenious establishment of polyphony is a result of his two years' study in Baghdad of the Babylonian Bihistûn version. Rawlinson's example is the vowel sound *a*, but it also has the ideographic value "son", "and in that capacity must, I think, be sounded *bar*".¹

But Rawlinson could do more than this. He made a translation of a long, quite unknown unilingual text, Shalmaneser III's famous Black Obelisk Inscription (190 lines) found by Layard during the Kuyunjik excavations, accompanied by an abundant material of notes, in which the meaning of the cuneiform signs of the inscription is discussed.² This was a mental tour de force of mark, and shows Rawlinson's penetration into the texts, his understanding of their contents and language, while it reveals his unequalled powers as a decipherer and a translator that, during his preparation of Bihistûn's Babylonian version, he could at the same time decipher and translate the Black Obelisk Inscription. The only point causing him much trouble as it did Hineks, was the reading of the royal names. Hineks read Sennacherib: *Sin-ki-ram*;³ for this reading Rawlinson substituted *Bêl-adonim-ša*, just as he read *Temen-bar* II for Shalmaneser II, *Hevenk* for Adad-nirâri, etc. There is nothing to criticize in this, for royal names were written entirely in ideograms, the meaning of which could only be elucidated by a study of the Assyro-Babylonian syllabaries.

However, Rawlinson's lectures in the Royal Asiatic Society and their publication the same year (1850) were only forerunners of the signal achievement of his life: *Memoir on the Babylonian and Assyrian Inscriptions*.⁴ Rawlinson had brought the manuscript with him from Baghdad, emendations and corrections were made during his stay in London, but, as was demonstrated above, in the lecture he held one month after his arrival in London, all the main principles were laid down, the polyphony was established as well as the fact that a great many of the signs were syllabic. Rawlinson himself superintended the printing and proof-reading of a considerable portion of his *Memoir*, of which the printing was finished before the 17.5.1851 (see

¹ *Ibid.* p. 405².

² *Ibid.* pp. 431-446.

³ Cp. above p. 151.

⁴ *JRAS* XIV 1 (1851).

p. 153), but by his return to Baghdad in the autumn, now promoted Lieutenant-Colonel, he was prevented from seeing the printing completed. Here Norris again assisted him and about the 1st January 1852 the complete volume appeared.

Rawlinson's unique work consists of 18 unnumbered pages, containing as the main items an "Indiscriminate List of Babylonian and Assyrian Characters", comprising 246 numbers in all; further CIV pages of "Analysis", plus 16 pages of "Mémorial on the Babylonian and Assyrian Inscriptions", Chapter I: Alphabet, plus 17 plates reproducing the original text of the Babylonian version with transliteration and translation into Latin. In an introductory unpaginated note he points out that "During the time consumed in writing and printing these papers on the Babylonian and Assyrian Inscriptions, continued accessions have been made to our store of Cuneiform materials, and I have found reason to amend or modify my opinions on many points of orthography, of etymology, and of grammar. A considerable difference will thus be found to exist between the Babylonian translation of the Behistun Inscription, as it is given in the sheets preceding the Mémorial, which were printed during my first arrival in England, and that which is more recently repeated in the Analysis now going through the press . . . I wish it therefore to be understood, that in all cases of disagreement, a preference must be given to the text, rendering, and translation, as they appear in the Analysis . . ."

In contrast with the perfection in the presentation of the whole of the material which distinguished Rawlinson's Persian Bihistûn publication of 1846(-47), the above-mentioned Babylonian publication is marked by its unfinished character, both as regards a complete analysis of the 112 lines of the text and of the 246 deciphered signs. We only get an analysis—according to Rawlinson's above-cited note, the decisive and correct one as compared with that of the 17 plates—of Column I, i. e. 37 lines in which in the last lines the royal name Nebuchadnezzar is correctly read *Nebu-kudur-ussur*, and as regards the analysis of the signs, the text as well as the notes come to an end in the middle of a sentence on p. 16, before Rawlinson has finished his study of sign No. 2. From this it will appear that in the main we have Rawlinson's earlier manuscript to rely on, in which the whole of the Babylonian version has been copied, transliterated, and translated, whereas we

have only 37 lines of the inscription in Rawlinson's revised and completed form. Thus there was enough work left for posterity, which was indeed obliged to revise a good deal, owing to the extremely difficult character of the script.

But in spite of all, Rawlinson's *Memoir* of 1851 is one of the great adventures in the history of science. In his analysis of Column I he has accepted Hineks' syllabic view, but has extended it to include also words consisting of closed syllables: consonant + vowel + consonant, of which he gives 68 in his list of signs, 50 being correct. In 1850 Hineks only knew 7 such (see p. 152). Further he applies his polyphonic principle to great advantage in reading and translating, just as it is also expressed in his list of signs: against each form, i.e. each cuneiform sign with its variations (Persepolis, Babylon, Nineveh), there are three columns, first "Phonetic Power", then "Ideographic value", and finally "Phonetic Powers arising from Ideographic values (?)." The list of signs comprises 246, 60 of which, however, are without phonetic value. 246 is no small number, more than the 82 Hineks had deciphered in 1850 (see p. 151). By Rawlinson's list of signs the foundation had been laid for all posterity's further advances, step by step, towards an approximately sure insight into some 600 cuneiform signs and their innumerable mutual combinations. And, not least, we must likewise remember his translation of the 212 lines, a tour de force equal to his translation of the Black Obelisk (see p. 155), which shows his unequalled power of real insight into the contents of the text and the grammar and syntax of the language. Even if it has been contended that it appears from Hineks' manuscripts that he too was an eminent translator,¹ none of this material has been published, and it is to the published texts that we must turn in giving our estimate.

In his 6th paper, *On the Assyrio-Babylonian Phonetic Characters*,² Hineks was able, by means of 77 of Rawlinson's sign values which he accepted, and the 102 sound values deciphered by himself in 1850, (82 + 20 compound syllables, see p. 152), to decipher another 118 values not found in Rawlinson's work, besides discussing the possibilities with respect to 49 signs, the values of which were prob-

¹ See R. W. Rogers, *A History of Babylonia and Assyria*⁶ I (1915), p. 240¹.

² *TRIA* XXII 4 (1853), pp. 293-370; read 24.5.1852, with important additions dated 5.11. and 24.11.1852; published separately in 1852.

lematic; thus 346 cuneiform values in all are treated in this last work by Hincks. This was an extraordinary achievement which brought the decipherment of the difficult script a great step forward. Here again we see how the two scholars Hincks and Rawlinson inspired each other. But a certain bitterness may be traced with Hincks: "I think it proper to add in this place, that Colonel Rawlinson has not only adopted my system of classifying the characters, but my method of investigating their values by comparing different derivatives of the same root. . . If, then, it be alleged that Colonel Rawlinson was led to alter his views as to the literal nature of the cuneatic phonographs by his having adopted a better method of investigation than he had previously used, and not by the statements which I had made, I must reply that this better method is itself to be found in my previous publication."¹

I believe that I am pronouncing a just verdict when I say that as a linguistic genius, especially in the field of phonetics, Hincks was superior to Rawlinson, as he had shown already during the decipherment of the Persian version (see p. 121). And it is no less certain that Hincks' investigations in 1846-47 were the first advances made in the decipherment of the Babylonian version, an invaluable foundation for all later researchers to build upon; moreover, his syllabic theory, and more than 100 deciphered signs were a lever of the very greatest importance to his successors. But it was Rawlinson who established the law of polyphony, without which any actual penetration into the Assyro-Babylonian script or its language is impossible. Further it should be kept in mind that through his work at the Susian version (pp. 129-130) Rawlinson was familiar with the syllabic character of that script, and that he may therefore, independently of Hincks, have drawn his own conclusions as to the "Syllabism" of the Babylonian version. But first and last, even though posterity (Oppert 1859, C. Bezold 1882, and others), was bound both to add and to cut out something (cp. the two succeeding editions of the Babylonian Bihistûn inscription by C. Bezold (1882; transliteration) and L. W. King and R. C. Thompson (1907), which is the standard edition), it was Rawlinson who copied, transliterated, and translated the Babylonian Bihistûn inscription of 212 lines, and as a result of this produced 246 sign values, besides making a translation, without transliteration, of the Black

¹ *Ibid.* p. 307.

Obelisk Inscription. And Rawlinson's decipherment of the Babylonian Bihistûn inscription incontestably remains the very basis of Assyriology as a branch of science.

§ 9. Despite Rawlinson's and Hincks' important decipherments of 1851 and 1852 Rawlinson's translation gained few adherents. F. de Saulcy, in the above-mentioned letter to Prisse d'Avennes (see p. 149) scoffed at Rawlinson's polyphony: "Que penser d'une écriture où, par exemple, le même signe pouvait se prononcer indifféremment:

<i>a, ha, pa, bu.</i>	<i>da, rip, lap.</i>
<i>i, ya, nit.</i>	<i>pa, ha.</i>
<i>ku, du.</i>	<i>um, uv, vam, vav, li.</i>
<i>kuv, bil.</i>	<i>bar, hu.</i>
<i>du, kina, gina.</i>	<i>etc. etc.?"</i> ¹
<i>tar, has.</i>	

It was at this point that researchers found it difficult to accept Rawlinson's and Hincks' results. Fox Talbot says something similar in a letter dated 17.3.1857 to the Royal Asiatic Society's president Horace Hayman Wilson: "Many persons have hitherto refused to believe in the truth of the system by which Dr. Hincks and Sir H. Rawlinson² have interpreted the Assyrian writings, because it contains many things entirely contrary to their preconceived opinions. For example, each Cuneiform group represents a syllable, but not always the same syllable; sometimes one, and sometimes another. To which it is replied, that such a licence would open the door to all manner of uncertainty; that the ancient Assyrians themselves, the natives of the country, could never have read such a kind of writing, and that, therefore, the system cannot be true, and the interpretations based upon it must be fallacious."³

W. H. Fox Talbot (1800–1877) was an eminent mathematician who, amongst other things, in a paper published in *Philosophical Transactions* for 1836–37 concerning researches in the integral calculus, was on a track that might have led him independently to rediscover Abel's great theorem.⁴ In September 1840 he laid the foundation

¹ *Revue orientale et algérienne* ... II (1852), p. 162.

² Knighted 4.2.1852.

³ *JRAS* XVIII (1861), p. 150.

⁴ N. H. Abel's treatise was submitted to the French Society of Sciences in 1826, but was not published until 1841, 12 years after Abel's death.

of present-day photography by his calotype, afterwards talbotype, method, and patented his invention on the 8.2.1841. Talbot also studied Hincks' and Rawlinson's publications and was not only an amateur orientalist; in 1856 he published *Assyrian Texts translated*, which amongst other things contains a translation of Bellino's Sennacherib cylinder (see p. 87) and of Esarhaddon's cylinder inscription; he published a new and improved translation of the Sennacherib text in 1866, besides in 1860 contributing to Assyrian lexicography in *Contributions towards a Glossary of the Assyrian Language*. By permission of the Trustees of the British Museum and Sir Henry Rawlinson, Talbot had been given a copy of the inscription of Tiglathpileser I, found by Rassam in Kal'at Sharḫât (Assur), which was to be published in *The Cuneiform Inscriptions of Western Asia*. This was done in 1861.¹ From Norris' manuscript copy R. E. Bowler (see p. 78) had executed a lithograph copy for the large official publication. It was after this copy that Talbot translated the above-mentioned text, and dispatched it, sealed, to the Royal Asiatic Society on the 17.3.1857: "I have annexed to my translation a transcription of the whole into Roman characters, with a nearly literal version of each line, disposed in opposite columns."² At the same time he requested the Society to invite Hincks and Rawlinson also, independently of each other, to send in a translation of the Tiglathpileser I text, for mutual comparison, and also for comparison with his translation.

The Society became interested in the idea and invited Rawlinson, Hincks, and Jules Oppert, who was then in London, "to favour the Society with translations of the same inscription, to be sent, in like manner, under a sealed cover, with a view to their being simultaneously opened and compared by a committee formed for the purpose of examination."³ The request was complied with by the learned scholars, a time limit was fixed, and on the 25.5.1857 the seals were broken and a committee of five members with H. H. Wilson as president issued a minute report.⁴ The translations of Rawlinson and Hincks were those that most resembled each other. Rawlinson was the only one who had translated the whole text; Hincks' translation

¹ See 1 R 9-16.

² *JRAS* XVIII (1861), p. 151.

³ *Ibid.* p. 152.

⁴ *Ibid.* pp. 152-63.

was by no means complete; Fox Talbot's rendering was the weakest, often vague and little exact, while Oppert's translation occupied an independent position as compared with those of Rawlinson and Hincks. He annotated his renderings very extensively, but on many points took a standpoint different from that of the English scholars even though it could be seen that he had in the main worked on the same lines as they had. The general verdict of the jury on the four translations was that the similarities between them as to the sense and the verbal rendering was so remarkable, very often exactly the same, word for word, that the interpretation of the four could not be due to chance. The report of the committee showed very clearly that it regarded the decipherment of the Assyrian cuneiform script as an accomplished fact. The translations were published in the same year 1857, together with the committee's report under the title of *Inscription of Tiglath Pileser I, King of Assyria, B.C. 1150, as translated by Sir Henry Rawlinson, Fox Talbot Esq., Dr. Hincks, and Dr. Oppert.*¹

Despite this feat the antagonism to the Babylonian version did not cease. While the attacks had previously also been directed against the Semitic character of the language,² it was Rawlinson's polyphony, which we have seen de Sauley anathematise (1852, see p. 159), that brought forward opponents within Semitic philology. Such eminent Semitic scholars as H. G. A. von Ewald³ and Ernest Renan⁴ showed extreme reserve, though admissions were made in favour of the decipherment, for the polyphonic principle seemingly opened possibilities of great arbitrariness; a notion very sensible in itself. It was only the study of the syllabaries which was to show clearly that Rawlinson's intuition had been correct. The most vehement attack came from the French learned diplomat J. A. de Gobineau, who was for some time French Minister at Tehrân, Athens, and Rio de Janeiro, and whose name is best known from his racial theories on which he published a large book in 1853-55. In a publication of 200 pages dating from 1858, *Lecture des textes cunéiformes*⁵ he rejected Rawlinson's and Hincks' decipherment, where especially the polyphonic principle proved a stumbling block to him, produced a phonetic

¹ Also published later in *JRAS* XVIII (1861), pp. 164-219.

² See e. g. Ph. Luzzatto, *Le sanscritisme de la langue assyrienne* ... (1849).

³ *Gött. gelehr. Anz.* 1858, pp. 190-99.

⁴ *Journal des savants* 1859, pp. 165-86, 244-60, 360-68.

⁵ Enlarged edition in two volumes: 1864.

alphabet, and founded his readings on purely Arabic roots, but did not shrink from resorting to Pehlevi and other Aryan languages, since he regarded the language of the third version as a mixed language. His tentative translation into Arabic of the beginning of Nebuchadnezzar's Borsippa inscription, which Oppert had published in transliteration and translation in 1857 (see p. 163), we shall not reproduce, but merely his transliteration of the first word, the royal name Nebuchadnezzar: *Nnnemmmmmresusus*.

The vindication of the decipherment and the elaboration of it were the work of French Assyriologists. Hincks, who died in 1866, does not seem to have taken up any polemical attitude, and his life-work was in the main finished 1857; Sir Henry Rawlinson was fully occupied directing the English British Museum excavations in Mesopotamia, and continued hereafter his diplomatic career as English minister plenipotentiary to Persia, with the army rank of major-general, on the 16.4. 1859. Jules Oppert (1825-1905), born at Hamburg, expatriated to France in 1847 as he was of Jewish descent, and precluded from holding a professorship in Germany, has previously been mentioned in these pages, partly as a scholar who, independently of Rawlinson and Hincks, arrived at similar results as regards the decipherment of the ancient Persian version (p. 121), partly as the producer of a critical scientific revision of Rawlinson's *Bihistûn* publication of 1846(-47) (p. 122). In Assyriology in its infancy his contribution was overwhelming and all-predominating. After the foundation of the decipherment had been laid and the understanding of the linguistic garb of the third version had been arrived at by Rawlinson and Hincks, it was Jules Oppert who by numerous publications, polemical as well as constructive and creative, consolidated the new science, created a general esteem and respect for Assyriology, and produced systematic works which are the groundwork on which the whole of the later development came to be based. Oppert's name may with some justice be mentioned side by side with those of C. J. Rich, Edward Hincks, and Henry C. Rawlinson if we were to enumerate the founders of Assyriology.

First Oppert issued a general view of the position of the decipherment at the moment, classifying the signs according to their values, stating at the same time to whom the decipherment was due.¹ A

¹ *Écriture assyrienne* ... (1855), reprinted with corrections in *ZDMG* X (1856), pp. 288-92.

similar survey was made in more detail by J. Ménant in 1860.¹ Next Oppert published a series of polemical articles in defence of the decipherment of the Babylonian cuneiform writing, among which we shall merely refer to his devastating criticism² of Gobineau's above-mentioned reading of the beginning of Nebuchadnezzar's Borsippa inscription, the rejection of which was firmly rooted in Oppert's own translation of the whole of this text.³ Oppert's contributions to the new Assyriological science in the shape of treatises and text editions are exceedingly numerous, but above all his fame rests on the fact that he was the first to use the Assyro-Babylonian syllabaries for an exact determination of the Babylonian cuneiform signs and so prepare the way for a more accurate transliteration and translation of the texts and for a knowledge of the Sumerian language. And hence it fell to Oppert's lot once more (see p. 122 and below p. 166) to produce a scientifically revised text of Rawlinson's Bihistûn publication, this time of the Babylonian version, of which more below.

In a paper on an Assyrian astronomical text⁴ Hincks points out in a note which he dates the 21.7.1852, that a closer examination of an unpublished tablet from Layard's excavations 1849 at Kuyunjik, K. 64, and of other similar ones, "has led Sir Henry Rawlinson to the conclusion that they were bilingual; explaining, not the meaning of monograms or ideographs, but that of words in a language which he calls Accadian, and which he considers to be Scythic or Turanian. *Ud.du* was the Accadian word for "coming forth . . ." "⁵ Hincks' remarks about this extremely significant observation of Rawlinson's in 1852,⁶ which forms the starting point of Sumeriology, is of signal importance, since Rawlinson himself did not, as we shall see, publish his observations till a year later.⁷ After this Hincks himself studied these bilingual texts, and gave examples of a transliteration of 9 short texts accompanied by a number of grammatical observations⁸ to which we shall revert in another connection. But it was Oppert who utilised the

¹ *Les écritures cunéiformes. Exposé des travaux qui ont préparé la lecture et l'interprétation des inscriptions de la Perse et de l'Assyrie* (1860, ²1864).

² *Revue orientale et algérienne* IV (1859).

³ *Études assyriennes* (J.As. V. sér., t. 9 (1857), pp. 125-209, 490-548; t. 10 (1857), pp. 168-226).

⁴ *TRIA XXIII* 2 (1859; read 12.11.1855).

⁵ *Ibid.* p. 44 the note, dated 21.7.1852.

⁶ See above note 5.

⁷ *Athenæum* 1853, p. 228; 1855, p. 1438, see below pp. 164 f., 176.

⁸ *ZDMG* X (1856), pp. 516-18.

bilingual syllabaries, thus gaining recognition for Assyriology and bringing to an end the interpretations of the script. This statement must of course be understood to mean that new finds of texts as well as of actual syllabaries, e.g. the Brussels Vocabulary (1913 and 1922), the Yale Syllabary (1915), the Chicago Syllabary (1917), Zimolow's Vocabulary (1922), have shown from decade to decade right up to the present day that corrections as well as supplements to earlier readings are necessary.

The four chief types of syllabaries then known were as follows: (1) Sound value / sign / name of sign (S^a). (2) Sumerian value / sign / Akkadian value (S^b). (3) Sumerian value / sign / name of sign / Akkadian value (S^c). (4) Sumerian value / compound signs / name of signs / Akkadian value (S^d). As to the syllabaries, vocabularies, grammatical and lexical lists known to-day the reader is referred to Chapter XIV § 3.

In the early days of Assyriology it was in the main S^a and S^b that were used though recourse was also had to the others; abundant information was gathered, resulting in emendations and supplements to the texts read and translated up to 1851. Hincks' comments on the texts shown to be bilingual by Sir Henry Rawlinson in 1852 were not published until 1859, but about Rawlinson's observations we obtain our earliest knowledge through the reports in the *Athenæum* of the Royal Asiatic Society's meetings on the 5.2.1853 and the 1.12.1855.¹ At the first meeting Rawlinson mentions the unilingual Babylonian-Assyrian texts which are composed in a real "bonâ fide Seythian" language; he states that these inscriptions are at any rate older than Nehuchadnezzar's time and is mainly interested in the ethnological and linguistic possibilities. But in 1855 he says, according to the verbatim report: "... for all the clay tablets of the British Museum, dug out from the ruins of Koyunjik, and which have hitherto been entitled syllabaries, being regarded as mere phonetic explanations of arbitrary monograms and simple and compound ideographs, are now found to be nothing more or less than comparative alphabets, grammars, and vocabularies of the Assyrian and Babylonian (Seythie) dialects. The Babylonian Seyths, whose ethnic name is Akkad, may be assumed to have invented the cuneiform writing."² With these

¹ See above p. 163 note 7.

² *Athenæum* 1855, p. 1438.

words Sir Henry Rawlinson founded Sumeriology on the 1.12.1855. We shall revert to this subject in a later paragraph, but it is interesting to note that Rawlinson now, by means of these syllabaries, was able to read correctly Assyrian and Babylonian city names and royal names.

It was, however, Oppert who, by a thorough study of the syllabaries, made use of all their information and thus created the first systematic, scientific Assyriology. In 1856 he published a paper with the characteristic title: *Premiers déchiffrements de la langue cunéiforme, d'après les grammaires et les dictionnaires de la Bibliothèque de Sardanapale...*¹ in which the importance of the syllabaries is emphasised, while otherwise the paper is mainly of an ethnological and historico-chronological character. But in his principal scientific work of 1859, *Déchiffrement des inscriptions cunéiformes*,² all Oppert's readings which denote improvements, alterations or supplements to the work of all his predecessors within cuneiform research are based on an intensive study of the Assyro-Babylonian syllabaries.

This admirable publication is divided into three parts. In the first Oppert gives grounds for the decipherment of the Babylonian version by showing on what fundamental principles the decipherment rests, and points out how a decipherment is possible on these principles. Then he characterises the script which, as in 1855 (see p. 162 note 1), he calls "anarienne", i. e. non-Aryan. A lengthy chapter deals with the hieroglyphic origin of this script, by which Oppert alludes to an original pictographic writing as the starting point. He also gives it as his opinion that the cuneiform writing is not of Semitic origin. Further, terms such as ideogram, phonetic complement, and polyphony are explained in a special chapter, and the first part concludes with a list of signs comprising the 318 signs most frequently employed.

In the chapter on polyphony (Chapter IV) Oppert for the first time publishes parts of the syllabaries S^a (fragment K. 62) and S^b (K. 110), a most important publication, while at the same time he correctly explains polyphony broadly as a result of the use of the same writing as a means of expression by different peoples speaking different languages. Oppert states what his book owes to the knowledge of the

¹ *Annales de philosophie chrétienne* ... IV. sér., t. 14 (1856), pp. 165-96, 245-57, 325-55.

² *Expédition scientifique en Mésopotamie* ... II (1859).

syllabaries, and since then they have been used, augmented by numerous later excavated philological texts (see Chapter XIV § 3) and diligently studied by all Assyriologists. S^a (K. 62) was published in II R 3 (1866), S^b in II R 1; 2; and 4 (1866), and were then very extensively used by Norris during the preparation of his dictionary, and by Ménant when he produced his list of Assyrian signs; the first collective edition of the syllabaries then known is due to Fr. de Lenormant (1877).¹

In the second part of his work Oppert undertakes a complete revision of the Babylonian version of all the Achaemenian inscriptions, including Rawlinson's Bihistûn edition of 1851,² but the greatness of Oppert's contribution comes out clearly in the third part which consists of a decipherment of unilingual inscriptions from Babylon and Nineveh, texts which no one before Oppert had deciphered and read. Here are several Nebuchadnezzar inscriptions, amongst others the first 22 lines of the East India House Inscription, royal inscriptions from the time of Neriglissar and Nabonidus, Khorsabad inscriptions, and from Ashurbanipal a lion-hunt inscription, and the royal ownership inscription on the tablets. When Jules Oppert the next year issued the first grammar, *Éléments de la grammaire assyrienne* (1860, ²1868), of the language of the Babylonian versions and the Assyro-Babylonian inscriptions, the resistance to this new branch of learning ceased. But Oppert had not only vindicated what had been created by others, he had himself added so much that was new and correct, especially on the basis of his syllabary studies, that we can safely say that his readings are superior to Rawlinson's. But I find it difficult to reconcile myself to his transcriptions which are made in Hebrew letters, though of course it did not for a moment occur to Oppert that the language was equivalent to Hebrew.

In England the fight of the young science of Assyriology against all resistance and its final victory found expression partly in *Inscriptions in the Cuneiform Character from Assyrian Monuments, discovered by A. H. Layard* (1851), partly and especially in the magnificent publication *The Cuneiform Inscriptions of Western Asia*, planned and con-

¹ *Les syllabaires cunéiformes* ... (1877), cp. also Fr. Delitzsch, *Assyrische Lesestücke* ... 3. Aufl. (1885), pp. 41-90.

² *Expéd. scient. en Mésop.* II (1859), pp. 198-250; later improved editions of the Babylonian Bihistûn Inscription are due to C. Bezold (1882) and L. W. Kling and R. G. Thompson (1907).

ducted by Sir Henry Rawlinson and issued in five folio volumes in 1861–84.¹ Rawlinson's collaborators were E. Norris (Vols. I–II, 1861, 1866), George Smith (Vols. III–IV 1870, 1875), and Th. G. Pinches (Vol. V 1884, IV² 1891, V² 1909). The plates were lithographed by R. E. Bowler (Vols. I–IV) and Jankowski (Vol. V). This publication was long, and is still, on many points, a main work among the innumerable publications of cuneiform texts from now on following rapidly in England, France, Germany, and the U. S. A.—Cuneiform texts in the British Museum regarding inscriptions of kings from the time of Nabonidus to the time of Darius were published by J. N. Strassmaier 1887–90.—As a consequence of the great increase in the cuneiform tablets acquired by the British Museum since Rawlinson's time, a series which is still running was started in 1896 on the initiative of Sir Ernest Budge, as a kind of continuation of Rawlinson's publication. The title is *Cuneiform Texts from Babylonian Tablets, etc., in the British Museum*, and it comprises partly new texts and partly revisions of previously published important texts. Budge's chief collaborators were Th. G. Pinches, L. W. King, R. C. Thompson, P. S. P. Hancock, Sidney Smith, and C. J. Gadd; the plates are diminished photographic reproductions of the copyist's proper copy of the text.—From 1935 another method of reproduction was started by the Oriental Institute of the University of Chicago at the instance of Arno Poebel:² that of using for publication an enlarged photograph of the cuneiform tablet and tracing the signs on it, and then bleach the photograph so that the signs stood out.—Another important publication was the five volumes issued by Carl Bezold in 1889–99 entitled *Catalogue of the Cuneiform Tablets in the Kouyunjik Collection*, in which are registered, described, and often reproduced parts of the contents of about 22,000 cuneiform tablets in the possession of the British Museum.

In France it was the triumvirate Jules Oppert, Joachim Ménant (1820–99), and Fr. de Lenormant (1837–83) who in innumerable books and papers concerning almost all branches of Assyriology such as linguistics, history, chronology, cultural history, topography, religion etc. vitalised the contents of monument inscriptions and cuneiform tablets, while the interrelationship between Mesopotamia and especially the western countries was subjected to a penetrating dis-

¹ Vol. IV² 1891, V² 1909.

² See E. R. Lacheman, *JAOS* LV (1935), pp. 429 ff.

cussion. In popular works, too, the French Assyriologists gave the educated reader some insight into the significance of the Mesopotamian discoveries, whereas in England Hincks never made any attempt to write about Assyriology for the general reading public, while Norris and Rawlinson, as previously stated, were fully occupied in publishing texts. Of the large French text editions may be mentioned P. É. Botta, *Monument de Ninive* III–IV (1849); *Délégation en Perse. Mémoires . . .* (II ff. 1900 ff., by V. Scheil); *Musée du Louvre. Département des antiquités orientales. Textes cunéiformes* (1910 ff.).

In Germany Rawlinson's decipherment and the French Assyriologists' elaboration of it was adopted by Eberhard Schrader (*ZDMG* XXIII, 1869 and XXVI, 1872); the chief larger German text editions are *Assyriologische Bibliothek* (1881 ff.), *Keilinschriftliche Bibliothek* (1889 ff.), *Beiträge zur Assyriologie* (1890 ff.), *Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft* (1900 ff.), *Vorderasiatische Bibliothek* (1907 ff.) and *Vorderasiatische Schriftdenkmäler . . .* (1907 ff.). From the U. S. A. we may mention: *The Babylonian Expedition of the University of Pennsylvania. Series A: Cuneiform Texts* (1893 ff.); *University of Pennsylvania. The University Museum. Publications of the Babylonian Texts* (1911 ff.) and *The Yale Oriental Series. Babylonian Texts* (1915 ff.); for the many other text editions in England, France, Germany and the U. S. A. we refer the reader to Anton Deimel's bibliography in *Orientalia* Num. 27 (1927); for the period after 1926 to the current volumes of E. F. Weidner's *Archiv für Orientalforschung* III ff. (1926 ff.).

Necessary aids in a study of the Assyro-Babylonian texts are lists of signs, lexicographical works, and grammatical studies. Among the most important of these within each group, from the early days of Assyriology to the present, I give the following in chronological order:

1. Lists of Signs, Collections of Signs.

Joachim Ménant, *Éléments d'épigraphie assyrienne. Le syllabaire assyrien . . .* I–II (1869–73; *Mémoires de l'Acad. d. Inser. et Belles-Lettres* VII 1–2) is naturally based on Rawlinson's and Hincks' lists to which he has made additions; it is a gigantic work of 916 quarto pages in which earlier readings are verified or corrected with great success. The number of simple signs, 335, has been increased to 493 in his *Manuel de la langue assyrienne* (1880).

Ed. de Chossat, *Classification des caractères cunéiformes babyloniennes et ninivites* (1874, 21878) contains 1509 numbers of signs with detailed text quotations and translations; many signs are identical but from different periods and the arrangement of the signs is not the modern one, which Brünnow inaugurated in 1889.

R. E. Brünnow, *A Classified List of all Simple and Compound Cuneiform Ideographs occurring in the Texts hitherto published . . .* (1889; Indices 1897), is the great fundamental work within Assyriology as regards the list of signs, their reading and lexicographical interpretation. As a result of the constant addition of fresh text material three supplements to Brünnow's work have seen the light in the 20th century, viz. Ch. Virolleaud, *Supplément à la liste des signes cunéiformes* (1903), Ch. Fossey, *Contribution au dictionnaire sumérien-assyrien. Supplément à la "classified list" de Brunnnow* (1905-07) and Bruno Meissner, *Seltene assyrische Ideogramme* (1910; AB XX).

Seventeen years after Meissner's supplement had appeared Anton Deimel started the publication of the most complete list of signs known up to the present. In his *Šumerisches Lexikon* II 1-4 (19(27)28-33)¹ he produced a list of signs numbering 598, and on 1144 quarto pages he registered all simple and especially compound ideographs. Deimel's list is naturally based on those of his predecessors, but his own contribution consists partly in the preparation of the new text material from the years 1910-1933, partly in a verification of the results of the earlier lists of signs. Deimel's gigantic work is the staff on which every Assyriologist daily leans, an indispensable aid which renders superfluous the use of the above-mentioned earlier collections of signs, even though Brünnow's *Indices* (1897) is still of great interest in the study of Sumerian.

A more easily handled and excellent aid, filling 957 octavo pages, is Gert Howardy, *Clavis cuneorum sive Lexicon signorum Assyriorum linguis Latina, Britannica, Germanica . . .* (1933); it is also, as will be seen from the title, a dictionary, and includes an index of the Akkadian words, edited by G. R. Driver, which can be used as a glossary. Howardy's work has valuable references to periodicals regarding the semasiology and the most useful Pars I: *Ideogrammata praeipua* (97 pages), wherein the more common ideographs are presented

¹ This most imposing grand work comprises in 1950, with the assistance of P. Gössmann, 4 parts in 9 volumes.

separately; Pars II: Ideogrammata rariora comprises 774 pages. The work, however, bears traces of its first parts having been published in the period 1904–12.

The special Akkadian (Assyro-Babylonian)¹ syllabary, i. e. the Akkadian signs employed and their varying sound values, was published in a very thorough-going work with references to the sources by Fr. Thureau-Dangin, named *Le syllabaire accadien* (1926; with an appendix in *Les homophones sumériens* (1929), pp. 41–50). It was enlarged, amongst other things on the basis of fresh finds of texts, from 285 to 325 numbers by W. v. Soden in *Das akkadische Syllabar* (*Analecta Orientalia* 27, 1948). The homophonous Akkadian sound values were registered separately by Thureau-Dangin (1926, pp. 53–68) who here as the first attempted a method of transcription of the homophones by accents and numbers (e. g. *du*, *dú*, *dù*, *du*₄ *du*₅ etc.), whereas Deimel (1928–33, see above) transcribed *du*, *du*₂, *du*₃ etc. The Sumerian homophones were registered by Fr. Thureau-Dangin in 1929 (see above), while A. Deimel in 1931 registered all cuneiform homophones in *Umschrift der Keilschriftzeichen in sumerischen, akkadischen und hethitischen Texten*.

As a combination of the above-mentioned works of Thureau-Dangin and Deimel, including the *ŠL* II 1–4 (1928–33) of the latter there has recently appeared an excellent shorter sign-list and syllabary which likewise gives the developmental history of the individual signs (see below pp. 194–98) from all such published before, René Labat's *Manuel d'épigraphie akkadienne* (1948, ²1952).—As to lists showing the varying forms of the cuneiform signs through the Sumerian and Assyro-Babylonian period, see Chapter IV § 3.

2. Lexicography.

Disregarding F. de Sauley's *Lexique* for the Babylonian version of the Bihistūn inscription² for reasons which we have given above, the first attempts at an Assyrian dictionary independent of an interpreted text are due to Edwin Norris (1866)³ and H. Fox Talbot (1868)⁴. Then followed the great work Edwin Norris' *Assyrian Dictionary* I–III

¹ Concerning the use in recent research of the term Akkadian instead of Assyro-Babylonian, see below pp. 174–75.

² *J. As.* V sér., t. 5 (1855).

³ *JRAS* N. S. II (1866), pp. 225–56.

⁴ *JRAS* N. S. III (1868), pp. 1–64; IV (1870), pp. 1–80.

(1868-72), an impressive achievement for the time, even though posterity has been obliged to alter a good deal. The work is incomplete, it only goes to *n-ṣ-t*; Norris' feeble health and his weak eyesight, perhaps the result of his devotion to the study of cuneiform texts, necessitated aid from others; only in this way could he carry on his work so far before his death put an end to it.

Ed. de Chossat, *Répertoire assyrien* (1879) contains pp. 1-184 a dictionary or more particularly a glossary regarding the vocabulary of the Assyrian inscriptions.

Stanislas Guyard, *Notes de lexicographie assyrienne* (1883; first published in *J.As.* VII. sér., t. 12-13, 15 (1878, 1880) and *Nouvelles notes de lexicographie assyrienne* (*J.As.* VIII. sér., t. 2 (1883), pp. 184-198).

A thorough-going work, but merely a dictionary comprising a limited vocabulary, as the title shows, was J. N. Strassmaier's *Alphabetisches Verzeichniss der assyrischen und akkadischen¹ Wörter der Cuneiform Inscriptions of Western Asia Vol. II . . .* (1882-86; AB IV).

In 1887 Friedrich Delitzsch had begun the publication of his *Assyrisches Wörterbuch*, intended as a Thesaurus of the same size as Brugsch's Egyptian dictionary (1867-82), but the publication was stopped in 1890 after three parts had been issued (488 pages, the letter Aleph), as Delitzsch did not think the time was ripe for so largely planned a lexicographical work. Instead he published in 1896 *Assyrisches Handwörterbuch* (730 pp.) which has been of the greatest help in Assyriology as a careful and thorough-going work but which has now become antiquated in many respects. On the principle of arrangement of this and the following dictionaries see below p. 174.

On the basis of Paul Haupt's lexicographical collections, which had been projected by the latter as the starting point of a new Assyrian-English glossary, W. Muss-Arnolt, taking into consideration all cuneiform texts published up to the year 1893, and keeping to Haupt's plan, prepared *A Concise Dictionary of the Assyrian Language* which began to appear in 1894 and was concluded in 1905 (2 Vols., 1202 pp.). In the later parts of the work Delitzsch's above-mentioned dictionary from 1896 was used as well as Brünnow's and Strassmaier's works (see p. 169 and above) and all text publications up to 1905 with the exception of *Cuneiform Texts* (see p. 167). Muss-Arnolt's dictionary registers lexicographically more than double the number of Assyro-Babylonian

¹ i. e. Sumerian, according to the usage of the time, see also below p. 177.

words of Delitzsch's *Handwörterbuch* (1896) but bears traces of having begun to appear in 1894 and cannot meet the scientific requirements of our day.

Besides the dictionaries of Delitzsch and Muss-Arnolt, which are still consulted by Assyriologists and have not yet been replaced, there are two glossaries at our disposal. In 1915 and 1920¹ Carl Bezold (1859–1922) issued prospectuses of a dictionary projected by him, but the work from 1926 published posthumously by A. Götze² is merely a glossary like Deimel's glossary of 1937³. Cecil J. Mullo Weir's *A Lexicon of Accadian Prayers* (1934) is very useful, but the vocabulary is limited to the religious rituals of expiation. Both Bezold's and Deimel's works are in many ways useful aids but do not give numerous examples as e.g. Liddell & Scott's Greek dictionary (New ed. by H. Stuart Jones 1925–40, 2 vols.). Assyriology still lacks a real lexicographical aid on a level with the latter; we must still look forward to the results of The Chicago Assyrian Dictionary Project.

Before we proceed to discuss this we must mention that there are especially three scholars who have contributed valuable lexicographical supplements to the works of Delitzsch and Muss-Arnolt. As early as 1898 Bruno Meissner published *Supplement zu den assyrischen Wörterbüchern*, and he has also much later rendered great services to Assyro-Babylonian lexicography by works such as *Studien zur assyrischen Lexikographie* I–II (1925–29; *MAOG* I 2, III 3) and *Beiträge zum assyrischen Wörterbuch* I–II (1931–32; *AS* 1 and 4). Benno Landsberger's recent extremely acute lexicographical investigations have been entered in the bibliography of the *Journal of Cuneiform Studies* IV (1950) pp. 1–62; another important recent contribution is Wolfram von Soden, *Zum akkadischen Wörterbuch* (*Orientalia* N. S. 15 ff., 1946 ff.).

On the 1.10.1921 The Oriental Institute of the University of Chicago initiated the preparatory work for what is now called *The Assyrian Dictionary*, originally under the editorship of Daniel D. Luekenbill (d. 1927), who was succeeded by Edw. Chiera (d. 1933) with Arno Poebel as co-editor (1928 ff.), who after the death of Chiera was editor-in-chief from 1933–1948. The editorship has been taken over in 1948 ff. by Ignace Jay Gelb with advisory assistance by Benno Lands-

¹ *Sitzungsber. d. Heidelb. Akad. d. Wiss.* VI and XI (1915 and 1920).

² *Babylonisch-assyrisches Glossar* (1926).

³ *Akkadisch-Sumerisches Glossar* (*SL* III₁, 1937).

berger; editorial board 1953: I. J. Gelb, editor in-chief and associate editors: B. Landsberger, A. Leo Oppenheim, and Thorkild Jacobsen; 1954 ff. four editors-in-chief: Gelb, Landsberger, Oppenheim, and Jacobsen. Editorial secretary 1921–23: J. H. Maynard; 1923 ff.: F. W. Geers, recently Richard T. Hallock. No one who knows the difficult Akkadian language and the increasing addition of new texts through the intense work of the excavation expeditions both before and after the Second World War, will think of criticising the slow process of preparation. It may be permitted to point out that 35 years is a long time, but it must be kept in mind that the new Egyptian dictionary in which an international group of scholars co-operated for over a generation under the general editorship of Adolf Erman of Berlin, was begun in 1897, but was not printed and completed in five volumes until 1926–1931, 34 years after the beginning of the project. The realisation of the Assyrian Dictionary Project was in some degree delayed by the fact that it was originally a Thesaurus that the editor had in mind, but under the editorship of Edw. Chiera this gigantic project was abandoned. In 1933, 17840 words had been filed on 1½ million cards (Delitzsch, 6200 words; Muss-Arnolt, 13,700; Bezold 10,100), and it was thought that the total number of words, taking future additions into account, might be brought up to 20,000. The first volume (G: H) is to be published in 1956.

3. Grammar.

Before collections of signs and lexicographical aids saw the light the first grammar had, as previously mentioned (p. 166), been published by Jules Oppert in 1860.¹ It was a work which, despite its brevity, convincingly established the character of the Assyrian language. Valuable contributions to the Assyrian grammar were published in 1866 by E. Hincks.² The next grammar entitled *Exposé des éléments de la grammaire assyrienne* (1868; 2. ed. with the title: *Manuel de la langue assyrienne* (1880)), a work of 392 pages, impressive for its time, was written by Joachim Ménant. But clearer in all formulations, and containing the first syntactic exposition of the language, was the third grammar published, A. H. Sayce's *An Assyrian Grammar for comparative purposes* (1872). Sayce handsomely acknowledges his debt to Oppert's pioneer work of 1860, but he is himself responsible for

¹ The 1860 edition: 95 pages, ²1868: 125 pages.

² *Specimen Chapters of an Assyrian Grammar* (JRAS N. S. II (1866), pp. 480–519).

the collation of all grammatical units with Hebrew, and for all declension and conjugation paradigms being named after Hebrew models. This, in my opinion unfortunate, way of describing the grammatical elements of Assyrian was repeated by Friedrich Delitzsch in his *Assyrische Grammatik* (1889); the second, revised, edition of 1906 was for nearly half a century the only larger grammar available to students, and it was an excellent aid to a further penetration into more recent Assyrian and Babylonian texts. But in Delitzsch's grammar as well as in his dictionary of 1896, as also in Bezold's glossary, an infelicitous and often time-consuming principle of arrangement is employed, traceable to Sayce's Hebrew comparisons, whereas in the dictionaries of Muss-Arnolt and Deimel (1937) the arrangement is purely alphabetical.

In the twentieth century, shorter Assyrian grammars were issued by V. Scheil et Ch. Fossey (1901), A. Ungnad (1906, ²1949), Bruno Meissner (1907), Th. G. Pinches (1910), Samuel A. B. Mercer (1921), and G. Ryckmans (1938). Of these Ungnad's especially must be pointed out as an eminent work in all its concise brevity. Finally in 1952, W. v. Soden published his *Grundriss der akkadischen Grammatik* (*Analecta Orientalia* 33), in which an all-round survey is taken of the Babylonian and Assyrian languages in the various periods, and which is a fully up-to-date scientifically worked out grammar which contains incredible riches for future scholars to draw on. At the same time it must be pointed out that numerous details give rise to argument and will thus serve as the starting point of renewed profound researches.

As to the many special investigations of a grammatical, syntactic, etymological, and semasiological nature (e. g. by P. Haupt, A. Ungnad, B. Landsberger, A. Goetze, A. Poebel, W. v. Soden), the reader is referred to the bibliographies in Delitzsch (²1906) and W. v. Soden (1952).—The outlines of grammar and the glossaries found in the textbooks of Assyrian written e. g. by Fr. Delitzsch (1876, ²1912 = AB XVI), J. Ménant (1880), D. G. Lyon (1886), B. Meissner (1895), L. W. King (1908), P. Naster (1941), and G. Furlani (1949) do not require special mention.

As we have seen in the preceding pages, the general name for the two languages of Mesopotamia, in the south: Babylonian, in the north: Assyrian, became Assyrian after the publication of Oppert's grammar (1860) and Norris' dictionary (1868–72). In our day the name Ak-

kadian is used. That this word in one period of the last century had a quite different meaning will be seen below in § 10. By Akkadian we nowadays mean a group of Semitic languages in Mesopotamia and its colonies (e. g. Kül Tepe in Asia Minor). Contrasted with the Akkadian group is another Mesopotamian language, Sumerian, of which we shall say more below. It was only in lexicographical and grammatical works by Deimel (1937), Ryckmans (1938), and Ungnad (²1949) that the term Akkadian came into use, though Assyriologists had much earlier seen that the inhabitants of Mesopotamia in ancient times themselves called their language Akkadian and not Babylonian or the like. This was first observed by L. Messerschmidt in 1905,¹ but it was Arthur Ungnad who in 1908, on the basis of Messerschmidt's text, declared: "Seit Bekanntwerden des Textes VAT 1200 kann indess nicht der geringste Zweifel mehr bestehen, dass die Akkader niemand anders sind, als der semitische Teil der Bevölkerung; ihre Sprache [ist] die Sprache des Landes von Akkad oder das Akkadische."² Stephen Langdon was the first to adopt the name in print in a grammatical work from 1911,³ and in 1913 the great polyhistor Eduard Meyer writes, "Akkadisch heisst die semitische Sprache Babylonien."⁴ But as we saw above, it was only as late as the years before the Second World War that the term Akkadian gained currency.

§ 10. Before the final publication of Rawlinson's decipherment in 1851 had shown that the language in the third version of the Achaemenian inscriptions as well as in the unilingual Assyrian and Babylonian inscriptions was Semitic, Hincks declared in 1850 (see above p. 150) that the writing was probably of Indo-European origin, and Rawlinson also alleged that the script was of foreign origin, "but the whole structure of the Assyrian graphic system evidently betrays an Egyptian origin."⁵ Hincks spoke with more caution in 1852: "I hope in the present paper to satisfy all who will take the trouble to follow my arguments that the characters all represent syllables, and that they were originally intended to represent a non-Semitic language."⁶ These

¹ OLZ VIII (1905), col. 272.

² OLZ XI (1908), col. 62.

³ A Sumerian Grammar (1911), p. 3.

⁴ Geschichte des Altertums ¹ 2 (1913), p. 434.

⁵ JRAS XII (1850), p. 404.

⁶ TRIA XXII 4 (1853), p. 295; read 24.5.1852, published separately in 1852.

rather vague remarks acquire an entirely different and clearer meaning after the bilingual Babylonian texts were established by Rawlinson in 1852 (see p. 163).

In his lecture on the 5.2.1853 in the Royal Asiatic Society Rawlinson is reported to have said that these non-Semitic texts "were in . . . Scythian languages—taking the word Scyth in its largest sense, as it was employed by Prof. Rask".¹ This view was also held by Oppert who speaks of the Scythians as the inventors of the writing that the Assyrians and Babylonians borrowed from them.² In his lecture on the 1.12.1855 in the Royal Asiatic Society,³ Rawlinson speaks at greater length about the newly discovered language written in cuneiform characters, because he has now had an opportunity of studying the syllabaries, as we saw above p. 164 in a quotation. He calls the Babylonian Scythians Akkadians. "The Akkadians built all the primitive temples and capitals of Babylonia, worshipping the same gods, and inhabiting the same seats as their Semitic successors; but they appear to have had a different nomenclature, both mythological and geographical . . . Afterwards, as the Semitic tribes . . . increased in power, Shumir and Akkad, the two great divisions of the Scythians, were distinguished from Babylonia Proper."⁴ Rawlinson's fabulous power of penetrating into and understanding even this quite new text material is admirable; modern Sumeriology can subscribe to every one of these pronouncements from 1855. The same applies to what he says about the language. "The tablets, in fact, furnish volumes of comparative examples and interlineary translations; but it is at the same time doubtful if any close linguistic affinities are to be traced between the primitive tongue and any available dialect of modern times. The pronominal system approaches nearer to the Mongol and Manchu type than to any other branch of the Turanian family; but there is little or no resemblance of vocabulary. In general organization, the language evidently belongs to the same stock as the cuneiform Scythian of Elymais [i. e. Mal-Amirian see p. 125] and of Media [i. e. the Susian version], (the latter of which has been already subjected to a searching analysis), but still they are all three distinct dialects, differing

¹ *Athenaeum* 1853, p. 228.

² *L'Athénæum français* III (1854), pp. 991–93 and *ZDMG* X (1856), p. 290.

³ Reported partly verbatim in *Athenaeum* 1855, p. 1438.

⁴ *Ibid.* p. 1438.

from each other almost as much as the Turkish, the Mongol, and the Manchu."¹

For a very long time Rawlinson's terms Akkads about the people and Akkadian about the language remained the general international nomenclature, just as his penetrating observations in his lecture of the 1.12.1855 became a guide in the study of this new people, its language, and culture. Thus the term Akkadian is used by E. Hineks (1858),² A. H. Sayce (1871), F. de Lenormant (1873), E. Schrader (1874), Fr. Delitzsch (1874). Jules Oppert took another view. Above, when we mentioned the decipherment of the Susian version (pp. 124–125) we saw that Oppert as regards the Susian language changed his designations very often. As we pointed out above (p. 176), he adopted Rawlinson's first nomenclature Scythic but afterwards took the standpoint of calling the language Sumerian and the people Sumerians, for the first time in print in a report of a meeting on the 17.1.1869 in Société française de Numismatique et d'Archéologie, Section d'ethnographie et d'histoire, where Oppert had given a lecture on the origin and linguistic affinities of the new people: "... la grammaire et la structure d'une langue sont un argument décisif pour établir ses affinités. Les langues Turque, Finnoise, Hongroise, ont la même grammaire que la langue que M. Oppert appelle Casdénne ou Sumérienne. M. Oppert prouve ce fait par la forme des substantifs et les modes des verbes."³ And in time Oppert's nomenclature gained international currency. It was already employed in the period around 1880, but as we shall see, did not win the final victory until after 1889.

The first grammatical observations of a more profound kind were made by Hineks, though they are quite brief. But he has rightly observed that "die Verba bleiben durch alle Numeri und Personen unverändert... der Singular [der Nomina] nimmt bisweilen den Auslaut *a* an, der nicht bloss den Genitiv, sondern jeden beliebigen casus obliquus auszudrücken scheint.—Die Präpositionen der indo-europäischen und semitischen Sprachen werden durch Postpositionen ersetzt..."⁴ Here again we see evidence of Hineks' linguistic genius; it is of course only a few details of the structure of the Sumerian lan-

¹ *Ibid.* p. 1438.

² *Report of the 27th Meeting of the British Association for the Advancement of Science ... 1857* (1858), Transactions pp. 134–43.

³ *Compte rendus de la Société française de Numismatique ... I* (1869), p. 75.

⁴ *ZDMG X* (1856), pp. 516–17: *Brief des Herrn. Dr. Eduw. Hineks an Prof. Brockhaus.*

guage which are here presented, but everything is correctly comprehended. The other grammatical observation is found with Oppert in the above-mentioned report in the *Compte rendus de la Société française de Numismatique*; it refers in the main to the pronominal suffixes and the important postpositions regarded solely in their relation to case.

Insight into the grammar increased and a greater understanding was arrived at gradually as Sumerian texts were published with transliteration, translation and commentaries. To A. H. Sayce¹ falls the honour of having edited the first text, one of Shulgi's inscriptions; the second (II R 17-18) was translated by the indefatigable Jules Oppert.² Sayce calls the language Accadian, after Rawlinson's pattern, and groups it with Turanian dialects, Ugric, Ural-Altaic, Iberian and Basque languages. The text, an Akkadian seal of 12 lines, is accompanied by a detailed philological commentary, and in connection herewith he closely studies the pronouns and verbs,³ and ascertains that vowel assonance (harmony) is a characteristic feature of the language. But "the most distinguishing feature of the Accadian verb is the incorporation of the pronouns",⁴ of which he then gives examples. When Sayce later establishes the fact that "Besides these incorporated pronouns, there is another set which is prefixed to the subject pronoun instead of following it",⁵ we see that with these two observations he anticipates the line of thought in Arno Poebel's grammar of 1923. Oppert begins his treatise by upholding the designation Sumerian, since the kings of the earliest period call themselves "rois des Sumers et des Accads,"⁶ and he continues: "De ces deux appellations, les Accads représentent le peuple sémitique et les Sumers la nationalité touranienne. De plus, l'idéogramme exprimant le nom de Sumer est écrit par deux signes, dont l'un signifie "langue" et l'autre "adoration"; Sumer veut donc dire langue sacrée".⁷ Then follow a couple of pages in which are outlined characteristic details of the Sumerian language, which are not equal to Sayce's comments in penetration. Translations, but without transliterations, of formulae of exorcism (II R 17-18 and K. 1284)

¹ *Journal of Philology* 111 (1871), pp. 1-50.

² *J.As.* VII. sér., t. 1 (1873), pp. 113-22, 289-93.

³ *Journal of Philology* 111 (1871), pp. 27-45.

⁴ *Ibid.* p. 33.

⁵ *Ibid.* p. 35.

⁶ *J.As.* VII. sér., t. 1 (1873), p. 114.

⁷ *Ibid.* p. 114.

conclude Oppert's treatise. It was an aid in the translation of the first difficult text that it was in great part bilingual.

. But if any single scholar is to be mentioned as the father of Sumerian studies and of our knowledge of the language it must be François de Lenormant (1837-83). In his *Lettres assyriologiques*, 2. série, he produced under the modest title of *Études accadiennes* I-III (1873, 74, 79) a gigantic work of 1024 pages containing (1) A Sumerian grammar of 20 + 143 pp., which forms the groundwork of all later studies, but which has of course been much altered by his successors. Thus the treatment of the verb is adjusted to the patterns and terminology of Latin grammar (e. g. terms such as indicative, conditionalis, gerundive, participium, præsens, imperfectum etc. are employed), and Lenormant's extensive use of late Sumerian texts makes him further intensify and elaborate by exemplification Sayce's idea of pronominal incorporation in the finite verbal forms. On the other hand, Lenormant does not mention the infixes. The grammar is followed by complete paradigms of nouns and verbs, 143 quarto pages in all.-(2) A list of signs filling 57 pages, comprising 548 numbers which often besides the Assyrian form reproduce the Babylonian, Archaic, and Hieratic; by the three latter terms we now mean respectively Neo-Babylonian, Old Babylonian, and Pictographic. This list only gives the Akkadian, i. e. the Sumerian sound values.-(3) In tome II: 299 pages with 23 bilingual texts, where the original text is transliterated and translated. Besides by the syllabaries early Assyriology was greatly helped by the fact that Sumerian-Assyrian bilingual texts were found in large numbers. Then followed, transliterated and translated, 19 unilingual Sumerian texts.-(4) In tome III are given in transliteration alone and in translation 34 bilingual texts followed by a reprint partly in transliteration of the chief syllabaries, of which he himself had issued a collective edition in 1877 (see p. 166), and of fragments in transliteration of paradigms of verbal conjugations; the book concludes with a glossary¹ of the words occurring in the bilingual texts. There was also in this work a lengthy argument against Oppert's designation Sumerian which it will not repay the trouble to go into here; the various polemical treatises of the two scholars on this subject have lost all relevancy after 1889, as we shall presently see. In another of his works *La Magie chez les Chaldéens* . . . (1874) Lenormant put forward the

¹ Cp. also in his *La langue primitive de la Chaldée* (1875).

conjecture that the language belonged to the Ural-Altaic family.—Ed. de Chossat's *Répertoire sumérien (accadien)* (1882) rests upon Lenormant's great work.

In estimating Lenormant's achievement it should be recalled that before 1873 there was only concerning the Sumerian language Rawlinson's grandly conceived and correct conjecture as to the character of the language (1855), and a few grammatical observations by Hincks (1856), Sayce (1871), and Oppert (1873). Sayce's contribution especially was of great value, but what Lenormant did for future Sumeriology was no less than that for which Rawlinson laid the foundation both by his Persian and his Babylonian Bihistûn version in 1846(—47) and 1851. Instead of keeping solely to the information of the syllabaries, Lenormant provided the groundwork for the future understanding of the Sumerian language by means of bilingual texts, repeating Rawlinson's feat from his 1851-publication. The perusal, word for word, of 57 bilingual Sumerian-Assyrian texts gave a result which was embodied in Lenormant's 1024 pages. That posterity, as in the case of Rawlinson's Babylonian Bihistûn version, has had much to add and much to remove does not detract from Lenormant's work, which is the firm foundation on which all later Sumeriologists have based their studies.

Only brief mention shall here be made of the Joseph Halévy episode, which occurred in the infancy of Sumeriology. It may have been Oppert's words from 1873, "Sumer veut donc dire langue sacrée"¹ which gave rise to his denial of the existence of both the people and the language, and his conception of Sumerian as an ideographic system of writing invented by the Semites in Babylonia and used as a sacred language. Perhaps it was on account of racial prejudice that he denied that Babylonia, from where his ancestors, the Hebrew patriarchs, came, had been occupied by a non-Semitic people before the Semites, a people who were even said to have invented the writing which was the Semitic Babylonians' own ingenious invention. For a period of more than ten years Halévy put forth all his powers in trying to prove his theory. During the ensuing polemics he changed his view in the sense that he gave up the characterisation of Sumerian as an ideographic system of writing, using other terms instead, such as "idéophonie" or "allographie". By these new designations he tried to express his idea of another and more subtly abstruse

¹ *J.As.*, VII. sér., t. 1 (1873), p. 114, cp. above p. 178.

way of writing Assyrian than that generally known. As late as 1905, at the Orientalist Congress at Algier, he still maintained the view that the texts were written by and for Semites.

The chief publications during the Halévy episode are the following: on the basis of, and without alterations in, three lectures given by him in the Académie des Inscriptions et Belles-Lettres on the 10.7., 24.7., and 14.8.1874, Halévy published his aforementioned theory in the same year in *Journal Asiatique*.¹ Excellent counter-arguments were put forward by Oppert (1875),² Lenormant (1875),³ and Eberhard Schrader (1876).⁴ Halévy replied in 1876⁵ and with his reply issued his original treatise of 1874 as an independent publication of 268 pages under the title of *Recherches critiques sur l'origine de la civilisation babylonienne* (1876), in which an ideophonic explanation has replaced the ideographic; by "idéophonie" Halévy means a combination of the ideographic and phonographic systems, but his denial of the existence of the people as well as the language remains as untenable as ever. Halévy's publication gained adherents for him, for instance in Germany, but no Assyriologists joined him.

A more vigorous reply to Halévy's theory than the polemical one was given in three publications from 1879–84, and hence we meet with very few writers opposing Halévy's 1876-publication, apart from the always ready and very prolific Oppert. In 1879 appeared Paul Haupt's *Die sumerischen Familiengesetze in Keilschrift, Transcription und Übersetzung . . .* (1879), and next his *Akkadische und sumerische Keilschrifttexte nach den Originalen im Britischen Museum copiert . . .* published in 4 parts (1881–82; AB 1). Akkadisch and Sumerisch are Haupt's names for the northern and the southern dialect of the non-Semitic language of Babylonia, a nomenclature used by Rawlinson in 1855 (see p. 176). And finally in 1884 the publication of E. de Sarzec's and Léon Heuzey's famous *Découvertes en Chaldée . . .* (1884–1912) was started. This work contained not only unilingual Sumerian texts but also representations of statues and reliefs showing the outward appearance of the new people, and scholars as well as laymen could all see the difference from the well-known Semitic type in the represen-

¹ *J.As.* VII sér., t. 3 (1874), pp. 461–536.

² *J.As.* VII sér., t. 5 (1875), pp. 267 ff., 442 ff.

³ *La langue primitive de la Chaldée . . .* (1875).

⁴ *ZDMG* XXIX (1876).

⁵ *J.As.* VII sér., t. 7 (1876), pp. 201 ff.

tations on monuments from Khorsabad and Kuyunjik. Haupt's two linguistic works publishing hitherto unknown Sumerian texts form a fine continuation of Lenormant's pioneer work, and in the section in which he, in 16 pages, sets forth the main features of the Akkadian (i.e. the Sumerian) grammar he is the first to call attention to the important infixes under the name of "Verbale Stammbildungselemente", besides giving a Sumerian glossary (9 pages) based on Lenormant's and his own observations, which is valuable by its presentation of the chief words of the language.

But Halévy did not allow himself to be convinced by facts, but maintained his view, merely changing his nomenclature from "idéophonie" to "allographie" in his lecture delivered at the Orientalist Congress in Leyden in 1883,¹ published separately under the title of *Aperçu grammatical de l'allographie assyro-babylonienne* (1885). And strange as it may seem, he now found two Assyriologists of high standing to support him, Henri Pognon² and Friedrich Delitzsch,³ but the year 1889 was to silence all those who either supported Halévy's theory or doubted the existence of the Sumerian language.

In 1889 appeared R. E. Brünnow's *A Classified List* . . . which besides its other merits, mentioned above (p. 169), registered in extensive lists of non-Semitic verbal forms and of non-Semitic phonetic values⁴ the material of Sumerian signs and the Sumerian language known up to that year, besides giving the most complete Sumerian glossary⁵ since Lenormant's time (p. 179). Lenormant founded and justified Sumeriology, Brünnow presents it to us as an accomplished fact. And in the same year, in a review of Brünnow's work, C. Bezold⁶ calls attention to a text in the possession of the British Museum, 81,7-27, 130, in line 7 of which can be read *li-ša-an šu-me-ri*⁷ as a Semitic translation of

¹ *Actes du VI^e congrès intern. des Orientalistes*, II: Section sémitique (1885), pp. 535-68.

² *Les inscriptions babyloniennes du Wadi Brissa* (1887), pp. 7¹, 41¹ (*Bibliothèque de l'École des hautes études* 71).

³ *Assyrisches Wörterbuch I* (1887); *Assyrische Grammatik* (1889), pp. 61-71.

⁴ R. E. Brünnow, *A Classified List* . . . (1889), pp. 490 ff.: Supplementary List.

⁵ *Ibid.* pp. 574 ff.

⁶ *ZA* IV (1889), pp. 434-35.

⁷ *šu-me-ri* < *ki-en-gi* (see below p. 239:3. (c)), later *ki-in-gi/gi₄*; Th. Jacobsen, *JAOS* LIX (1939), p. 488: *ki-nigir* < *ki-nibir* < *ki-nibur* i.e. "the Nippur Region", which outsate Nippur > *šigir* > *šimir* > *šumer*; Delmel, *Orientalia* N. S. XIII (1944), p. 327: < *ki* (Akk. *iršitu, mātū*) + *gir₂* (mer) "foot" i.e. "home". But it is difficult matter to deal with.

the Sumerian EME. KU, Oppert's "langue sacrée" (see p. 178). This shows precisely that the Babylonians called the non-Semitic Akkadian of European scholars: Sumerian, and also that it was an existing language. Simultaneously the largely planned American excavations in Nippur began in 1889, and in the temple archives were found thousands of unilingual Sumerian texts.

From 1889 Sumeriology had been accepted as an internationally recognised science, and the name Sumerian adopted as the designation of the language. This was first expressed in C. F. Lehmann's *Šamašsumukīn, König von Babylonien* (1892; AB VIII), in which the results of previous Sumerian research were consistently applied,¹ Halévy was definitely dismissed, and the first detailed phonetic system² presented, based amongst other things on Šamašsumukīn's bilingual inscription. Important also is Lehmann's demonstration of a difference between earlier Sumerian and later Sumerian or, as he calls it, the "Neusumerische Sprache".³ In 1894 Fritz Hommel published the first textbook of Sumerian, entitled *Sumerische Lesestücke*, and in 1897 Fr. Delitzsch⁴ abandoned Halévy's theory.⁵ The first Sumerian lexicon was published by E. Ledrain, *Dictionnaire de la langue de l'ancienne Chaldée* (1897; 572 pp.), which is in reality a cuneiform sign-list, put in order alphabetically with transliterations and translations regarding especially the vocabulary of the Sumerian Telloh inscriptions. In 1905 J. D. Prince published *Materials for a Sumerian Lexicon with a grammatical Introduction* (1905-08; AB XIX), a voluminous work of 414 pages, a most deserving contribution for the time, which helped on the Sumerian studies. But there is no denying that the large number of Sumerian texts which have been published since F. Thureau-Dangin's *Les inscriptions de Sumer et d'Akkad* (1905; German transl. 1907), the first standard translation of Sumerian texts, have in great part altered the view of investigators both of the grammatical material and also of the meaning of words expressed in the cuneiform signs.

Finally we shall merely mention the grammatical and lexicographical aids published in our own time. The former have been issued by

¹ C. F. Lehmann, *Šamašsumukīn* ... (1892), pp. 57-173.

² *Ibid.* pp. 131-165.

³ *Ibid.* p. 162.

⁴ *Die Entstehung des ältesten Schriftsystems* ... (1897).

⁵ As to the history of Sumerian investigations up to 1898, see F. H. Weissbach, *Die sumerische Frage* (1898).

Stephen Langdon (1911), Friedrich Delitzsch (1914; shorter edition for non-Assyriologists the same year), Arno Poebel (1923), C. J. Gadd (1924), Anton Deimel (1924, 1939), and R. Jestin (1951); only Delitzsch's and Poebel's works are regular grammars, while the rest are also textbooks with a selection of texts, glossaries, lists of signs etc. It is a matter for Chapter V below, dealing with the Sumerian language, to judge of the divergences in view of the verbal prefixes and infixes. Poebel's grammar is an extraordinarily well-documented work, but to my mind it is based too largely on Neo-Sumerian texts, if we may use C. F. Lehmann's term (see p. 183). Conversely Deimel draws in the main on the earliest Sumerian texts. It is not unreasonable to wish that we may look forward to the publication one day of a historico-philological Sumerian grammar which should also preferably attempt to present the structure of the language, which differs entirely from that of the Indo-European and Semitic languages, on the basis of the Sumerian language itself. Deimel's works mark a step in that direction.

The lexicographical aids available to researchers, apart from Brünnow, the supplements to Brünnow, and Deimel's provisional conclusion of Brünnow's lifework (see p. 169), are not dictionaries such as e. g. Delitzsch's and Muss-Arnolt's Assyrian dictionaries, but mere glossaries of even more modest pretensions than Bezold's (see p. 172). Only two scholars have given us such glossaries in book form. A. Deimel in *Vocabularium Sumericum ad textus archaicos* (1910) treats lexicographically 2185 Sumerian words, published in more detail in *ŠL* III₁ (1934). The glossary from 1934, in particular, is of great value, but it is directly dependent on the gigantic work he produced in his "Neu-Brünnow" (i. e. *ŠL*) (see p. 169) and entirely lacks finer shades in his rendering of the meaning of the Sumerian words, takes no account of the ambit and contents of the words varying e. g. according to the historical or religious contents of the text. Fr. Delitzsch in his *Sumerisches Glossar* (1914) tries to exemplify by quotations from the texts and often gives several possible meanings of the Sumerian words, but the book cannot claim to be a real, effective dictionary. To this must be added the fact that the increase in published texts since 1914 is great, with a consequent growth of our knowledge of the Sumerian vocabulary, so that on this point Deimel's work from 1934 has a decided advantage. In 1937 Benno Landsberger started the publication of *Materialen zum sumerischen Lexikon. Vokabulare und*

Formularbücher, an important contribution to a future Sumerian dictionary, while in articles in periodicals he has given many valuable lexicographical studies, concerning the details of which the reader is referred to the bibliography of the *Journal of Cuneiform Studies* IV (1950), pp. 1-62. However, the time is hardly ripe yet for a Sumerian Liddell & Scott (New ed. by H. Stuart Jones 1925-40); administrative texts of every kind as well as historical texts have been interpreted with close approximation, but we are as yet far from being able to translate the Sumerian religious texts with certainty.

§ 11. When decipherment was begun the number of texts was exceedingly small; Niebuhr's copies of the Persepolitan inscriptions, the Caylus Vase, and some inscriptions on cylinder seals. This material was gradually augmented by the publication of Hager and Beauchamp's building bricks (1801, 1806), Caillou Michaux (1802), and the East India House Inscription (1803), and later the material of Achaemenian inscriptions was increased by the inscriptions from Murghâb (1812), Mt. Elvend (1836), Naqsh-i-Rustam (1845) and Bihistûn (1846-47). But since December 1842, when projected excavations were started in the ancient Assyrian land, in the three later capital cities of Dûr-Sharrukîn (Khorsabad), Kalhu (Nimrûd), and Nineveh (Kuyunjik), at the close of the 1840s and in the 1850s innumerable amounts of monument inscriptions and cuneiform tablets were brought to the Louvre and the British Museum. Elsewhere in these pages we shall discuss the large excavation expeditions and their results in the period from 1842 up to our own time, but it will be reasonable to conclude this section with an alphabetical list of the chief localities where Assyro-Babylonian and Sumerian texts have been found, and to give an outline of their chronology; as to details the reader is referred to the chapter (VI) on the excavations after 1842.

Cuneiform texts written in the Sumerian, Babylonian, or Assyrian languages have for the most part been found during the excavations in Mesopotamia, but most important finds, which in extent, in Mari alone, equal the thousands found in the Mesopotamian mounds, have been made outside the boundaries of the land of the two rivers, e. g. Hammurabi's famous law code, a monolith inscription stolen by the Elamites and found at Susa. The state archives of the Hittite kings in Boghazkeui may also be mentioned, as well as the commercial and

administrative documents from Kül Tepe, the Assyrian colony in Asia Minor, or the correspondence of the Egyptian Pharaohs Amenophis III and Amenophis IV of the XVIII. Dynasty with the rulers of the eastern countries, found in the ruins of the latter's newly built capital Akhutaten, present-day Tell el-Amarna. The cuneiform tablets are nearly always made of baked clay; only three large collective finds (Sippar, Kish, and Tell Abû Ḥarmal) show unbaked tablets. The monumental inscriptions are carved in diorite, alabaster, stone and other very durable materials.¹

Localities in which finds were made in Mesopotamia: Assur (Ḳal'at Sharḳât), Babylon (1876 bought by G. Smith: c. 3000), Balâwât, Bavian, Bismâya (2500) Dêr (c. 13,000), Drehem, Fara, Jemdet Nasr, Jôkha, Khorsabad (Dûr-Sharrukîn), Kirkuk (Arrapha), Kish (c. 1500), Kuyunjik (Nineveh 20,000–30,000), Larsa, Nimrûd (Kalḫu), Nippur (c. 35,000; several thousands 1952 ff.), Nuzu (c. 3000), Sippar (40,000–60,000), Tell Abû Ḥarmal (c. 2400), Telloh, Tell 'Uḳair, Ur (2000), Uruk (in the Iraqi Museum, Baghdad, alone: 2755 + 16,000 fragments). Not all the cuneiform tablets from the places enumerated here were transferred to the museums in the countries of the respective expeditions; owing to robberies by the natives a large number of texts e. g. from Telloh and Dêr were sold in the open market.

Localities outside Mesopotamia where finds were made: 1. Iran: Susa; 2. Syria: Alalah (Tell 'Aṭshânah); Chagar Bazar; Mari (c. 24,000); Ras Shamra (Ugarit); Sultan Tepe (between Urfah and Ḥarran); 3. Asia Minor: Boghazkeui; Kül Tepe; 4. Egypt: Tell el-Amarna (Upper Egypt).

Through the intensive work of the great excavation expeditions during the last 112 years Assyriology has been enriched with such an overwhelming material of texts that only a small part of it has been published; and yet it is so extensive that a single researcher will hardly be able to master the whole field of the script and language as it is now accessible, far less the contents of the texts. Still it is possible with tolerable certainty to arrange the enormous text material chronologically, if the script and the language are taken as the starting point. And here we shall finally give the chronology of the cuneiform texts in tabular form. The purely pictographic texts are the oldest, in these the

¹ A list of these carried down to 1904, see Ch. Fossey, *Manuel d'Assyriologie* I (1904), pp. 65–79, cf. also C. J. Gadd, *The Stones of Assyria* ... (1936), pp. 123 ff.

original character of the writing can be traced, the earliest group of the texts being unilingual Sumerian cuneiform tablets or relief inscriptions of a more monumental character.

A. I. Sumerian

1. Pictographic: Uruk texts.
Jemdet Nasr texts.
Ur (archaic texts).
2. Fara texts.
3. The texts published by F. Thureau-Dangin, *SAK* (1907).
4. Administrative and commercial documents from the time of Lugal-anda and Urukagina.
5. Texts of the Agade Dynasty.
6. Texts of the Ur III Dynasty.

B. Akkadian

- 1 a. Old Babylonian (chronologically \approx) 1 b. Old Assyrian (i. a. the Kül Tepe dialect).
- 2 a. Middle Babylonian (chronologically \approx) 2 b. Middle Assyrian.
- 3 a. Neo-Babylonian.
 - α . proper (Nebuchadnezzar) (\approx) 3 b. Neo-Assyrian.
 - β . Achaemenian Neo-Babylonian.
 - γ . Seleucian Neo-Babylonian.

CHAPTER IV

THE CUNEIFORM SCRIPT

§ 1. The distinctive cuneiform script is already mentioned in ancient times by classical authors; their names for it vary, earlier authors speaking about Ἀσσύριος [γράμματα]: Herodotus IV 87, Thucydides IV 50, and Strabo XIV 5, 9, whereas Diodorus Siculus II, 13, 1.2 refers to the cuneiform writing as Σέριος [γράμματα], while Athenaeus XII 39, p. 529 f. writes Χαλδαϊκός [γράμματα], just as Berossus apud Eusebius ed. A. Mai p. 19 uses this name. The ancients also speak of inscriptions in cuneiform writing, e. g. Diodor. Sic. II 13: about Semiramis' inscription on the Bihistûn rock; II, 23,3 about a Sardanapalus inscription, cf. Cicero, *Tusc. Disp.* V 35, 101.

In European research we have previously seen (p. 94) that the interest in the cuneiform writing steadily grew in the period 1750–1800. But everywhere attempts were made to refer the newly discovered script to one already known. E. Kaempfer (1712), C. G. von Murr (1777), R. E. Raspe (1791) called attention to the Chinese script (see p. 58), while A. Court de Gébélín¹ thought the Ogham script of Ireland was the nearest parallel to cuneiform. The majority of opinions, however, favoured the view that the cuneiform writing was derived from the Egyptian hieroglyphs; among these we shall only mention the anonymous author of *Persepolis illustrata: or, The ancient and royal palace of Persepolis . . .* (1739); A. C. Ph. Comte de Caylus (1762); and S. S. Witte (1789).²

Gradually as the decipherment proceeded two things became clear to the best informed. In the first place that the Babylonian version of the Achaemenian inscriptions was the oldest and the model on which the Susian and the Old Persian cuneiform writing was based, the

¹ *Monde primitif analysé et comparé avec le monde moderne . . .* III (1775), p. 506.

² *Ueber den Ursprung der Pyramiden in Egypten und der Ruinen von Persepolis* (1789), and in several other works in which he defended his thesis.

two latter kinds of cuneiform script being a simplification of an originally more complicated system. N. L. Westergaard was the first to publish this discovery in 1845 (see p. 137). Now that we know the Assyro-Babylonian history and prehistory it is a matter of course that the peoples of Mesopotamia are far more ancient than the Persians, but in 1845 nothing was known of the language, and about the people, their country and cities, especially the conquering kings, only sporadic information could be gathered from the Old Testament or scattered observations in classical authors. Isidore Löwenstern's tentative decipherments (see pp. 140 f.) could hardly afford any great support. And to this must be added the fact that Grotefend, whose position in cuneiform research could not be overlooked and who in his constant publications issued material sent direct to him from Babylon by C. J. Rich and C. Bellino, had maintained in 1837 that the languages were Zend, Pehlevi, and Parsi, and that the Achaemenians were the inventors of the cuneiform script, the simple system of writing arising prior to the more complicated one (see p. 136).

N. L. Westergaard's conjecture in 1845 proved to be the correct view. The second fact which the researchers realised, most clearly in the period after 1851 because Rawlinson's Babylonian transliteration of Bihistûn showed that the language was Semitic, was that the cuneiform script had not been invented by the Babylonians, the earliest users of it then known. Already in 1850 (see p. 150) Hincks had mentioned the possibility that the writing might be of Indo-European origin, his syllabic conception of the cuneiform writing presumably reminding of the Indian Devanāgarī script in which normally a short *ā* is inherent in the consonants. From the same year we have a brief report of a lecture given by Hincks at Edinburgh¹ in which we read amongst other things: "The mode of writing of the Assyrians . . . agreed with the Egyptian, in that it was partly ideographic . . . From these facts he inferred that the Assyrio-Babylonian mode of writing was adopted from some Indo-European nation, which had probably conquered Assyria; and he thought it likely that this nation had intercourse with the Egyptians, and had, in part at least, derived its mode of writing from that most ancient people."² This is

¹ *Report of the 20. Meeting of the British Association for the Advancement of Science . . . 1850* (1851), Transactions p. 140.

² *Ibid.* p. 140.

a strange combination of an Indo-European and Egyptian origin of the cuneiform writing. And the same year, 1850, Rawlinson gave it as his opinion¹ that the Assyrian system of writing pointed to an Egyptian origin (see p. 175).

After Rawlinson, before the 21.7.1852 (see pp. 163 f.), had found bilingual Assyro-Babylonian texts, and the study of the syllabaries, to which especially Oppert devoted himself, had begun, Rawlinson could in 1855 establish the fact that an entirely different people, which was called Sumerians after 1889, was the original population of Mesopotamia, and that it was only later that the invading Semitic tribes rose to such power that they formed the two leading states in the country: Assyria and Babylonia.

That the cuneiform writing invented by the Sumerians had originally been pictographic seemed to Oppert a justifiable contention after a consideration and study of the archaic Sumerian cuneiform tablets: "Tous les signes cunéiformes sont dérivés d'images. On ne crée pas de toutes pièces l'écriture: un seul homme peut bien simplifier ce qu'il a reçu d'autres, il peut utiliser des éléments graphiques qu'il a pris ailleurs; mais il lui est complètement impossible de les créer et de les imposer ensuite. Aussi toute l'histoire de la paléographie dépose en faveur de cette opinion . . . L'écriture anarienne (see p. 165) a un point de départ hiéroglyphique; il est de la plus haute évidence qu'une foule de monogrammes ont été visiblement la représentation figurée de l'idée qu'ils rendent."² Then follows a table with three columns: Hieratic, i. e. pictographic writing / Archaic / Modern, in which the original pictographic writing of the ideograms for "eye", "house", "heart", "city", "canalised arable land", "lying dog", and "sun" are shown.³ Oppert's view was not regarded as a theory that had to be proved sooner or later, but was considered as the correct demonstration of facts, which, it is true, were as yet only found in small number.

In his famous work *Primitive Culture* (1871) E. B. Tylor had advanced the view that all written language was derived from pictures representing objects or ideas. This in connection with the observation of a cuneiform tablet found in the South-East Palace at Nimrūd made W. Houghton attempt a further corroboration of Oppert's foremen-

¹ *JRAS* XII (1850), p. 401.

² *Expéd. en Mésop.* II (1859) p. 63.

³ *Ibid.* pp. 63-65.

tioned generally accepted idea of the pictorial origin of the cuneiform writing. On the above-mentioned tablet from Nimrūd was drawn a series of the original pictorial forms of certain cuneiform characters. With this tablet as his starting point Houghton studied some 30–40 cuneiform signs, and, not with equal success for all of them, it seems to posterity, determined their original pictorial form.¹ And among the researchers who adopted this view may be mentioned Ménant, Sayce, Ball, Hommel, and Hilprecht.

A fine work was François Thureau-Dangin's *Recherches sur l'origine de l'écriture cunéiforme* 1. partie (1898, Supplement 1899), containing a list of 563 archaic signs, in part pictographic, most of which he identified with Assyrian normal forms. This was pioneer work from which G. A. Barton derived much profit.

§ 2. The history of the Babylonian cuneiform script also has its "Halévy episode", represented by Friedrich Delitzsch's *Die Entstehung des ältesten Schriftsystems oder der Ursprung der Keilschriftzeichen* (1897, 239 autographed pages), in which he advances quite a different view of the origin and development of the cuneiform writing. Instead of regarding the many complicated signs as a further development of original pictures, he set forth the following theory: "Die Keilschriftzeichen sind aus ziemlich primitiven, geradlinigen Bildern hervorgegangen, d. h. Darstellungen von Sonne, Mond und Stern, Gebirg, Mensch und seinen Körpertheilen, Thieren, Pflanzen und Geräthen. Neben diesen "Urbildern" gab es aber auch eine Anzahl konventionellen "Urzeichen" oder "Motive" zum graphischen Ausdruck von "biegen", "niederdrücken", "umschliessen", "lang sein" u. a. m. Ein Theil dieser Urzeichen ist mathematischen Ursprungs. Besonders gute Dienste leistete den Schrifterfindern das sogen. "Steigerungsmotiv", bestehend in den vier Potenzierungs- oder Gunierungslinien. Die Zahl aller Urzeichen, der "Urbilder" sowohl wie der "Motive" zusammen dürfte 45 nicht weit übersteigen. Sämtliche übrigen e. 400 Schriftzeichen sind aus sinnreichen Kompositionen dieser 45 Urzeichen hervorgegangen. Ein kleiner Theil von Schriftzeichen wurde auch durch Zeichendifferenzierung gebildet – ein Verfahren, welches durch alle

¹ On the hieroglyphic or picture origin of the characters of the Assyrian syllabary (TSBA VI, (1879), pp. 454–83).

Stadien, die älteren wir die jüngeren, der Keilschriftentwicklung hindurch sich beobachten lässt."¹

This strange simplification which traces back the 400 Assyro-Babylonian cuneiform signs then known to 45 original signs, only 21 of which were originally pictographic "Urbilder", was a mere construction. That Delitzsch so energetically championed this idea was no doubt due to an observation he had made during his study of the syllabaries, namely that the Assyro-Babylonian philologists called certain signs *gunû* of an originally more simply written sign. For example, besides *sir*, S^a I 24 gives *sir-gunû*, augmented by four wedges compared with the original Sumerian *sir*, the basic sense of which is "to be long, long"; the *gunû* sign from this means something quite new, "the very long creature crawling on the ground, i. e. snake".² Or Sumerian *du*, originally the picture of a leg below the knee plus the foot, means "stand, place (something), walk", but when the *gunû* sign is added it as a rule acquires an abstract meaning, "foundation".³ The *gunû* elements of the writing are as a rule merely used to heighten or intensify the meaning of the simpler sign, but in this Delitzsch saw a potentialising motif and by this view he opened the way for the rise of the abstract motif. Thus Sumerian *ha* in the simple form means "fish", whereas in the *gunû* form it means the abstract "abundance, profusion." Delitzsch's demonstration of the *gunû* element in the Sumerian cuneiform was of great interest and importance; only his interpretation of this element was untenable. It caused him partly to abandon the view of the pictorial origin of the cuneiform writing and led to purely constructive considerations. Delitzsch, partly by virtue of his authority as an Assyriologist, and partly because the discovery of the *gunû* element was something new, gained many adherents of his theory, among whom H. Zimmern may be mentioned.⁴

§ 3. In 1902, Ellen S. Ogden published the archaic tablet in the E. A. Hoffman Collection, then together with the Blau Monuments A and B the oldest tablet known, in the General Theological Seminary, New York; in his attempt at an interpretation of it G. A. Barton⁵

¹ *Die Entstehung des ältesten Schriftsystems* . . . (1897) pp. 198-99.

² *Ibid.* p. 67.

³ *Ibid.* p. 68.

⁴ *ZA* XII (1897), pp. 274-77.

⁵ *JAOS* XXIII (1902), pp. 21-28.

partly took exception to Delitzsch's theory: "his explanation is too abstract to correspond to primitive ideas",¹ and in 1911 Ellen S. Ogden² proved that Delitzsch's "steigernde Bedeutung der Gunierung" could not be proved at all, all gunufied signs being merely variants without any difference in meaning. And in a work planned and carried out on a large scale G. A. Barton put an end to Delitzsch's theory by the publication in 1913 of *The Origin and Development of Babylonian Writing* (BA IX; 296 + 300 pages).

This work in the first place means the scientific consolidation of Oppert's idea of the pictorial origin of the cuneiform characters, further a thorough investigation of the *gunû* problems, and finally the first large scale attempt to register all the variants of the signs, by which Barton created the systematic cuneiform palaeography. As to the first point, Barton in the second part of the work passes in review 627 simple signs, states their chief meanings, the contents and scope of all that the sign can designate, and then, on the basis of this, tries to approach or establish the original sense of the sign, which again means the picture or hieroglyph to which its origin can be traced. Barton's investigations have been fundamental, and all subsequent pictorial investigations must start from them. But the date of its publication also shows its limitations, since much older, in part pictographic, in part other texts, have been found and published since 1913; names such as Urûk, Jemdet Nasr, Ur (archaic), and Fara speak for themselves.

The other important point in Barton's work was his elucidation of the *gunû* phenomenon. He derived much aid from Ogden's above-mentioned work in which essential objections had been raised. Barton's result was as follows: "What the scribes called *gunus* were signs, which had, at the time the scribes were compiling and classifying signs in syllabaries, certain resemblances to the forms of simpler signs but which in their earlier history afforded no evidence of having been constructed by the addition of the *gunu*-motif. Indeed in their earlier forms these signs, which the scribes had classified as simple signs and *gunus*, were in some cases variant pictures of the same sign, in which the variations had no significance except to indicate the preferences of scribes for certain forms, in some cases they represented pictures of different, though related, objects, while in other cases they represented

¹ *Ibid.* p. 27.

² *The Origin of the Gunu-Signs in Babylonian Writing* (1911).

pictures and objects which were totally unrelated."¹ He can therefore rightly conclude as follows: "With the break down of the theory of *gunus* the whole theory of the construction of signs from abstract motifs vanishes."² E. g.: if we compare $\text{HA} = \text{Sum. ku}_6 = \text{Akk. n\u0101nu}$ and $\text{HA-gun\u0167i} = (1) \text{Sum. gir} = \text{Akk. \u0161abattu or \u0161a\u0147\u0167u}; (2) \text{Sum. pe\u0161} = \text{Akk. libbu or rap\u0101\u0161u or \u0161alaltu}$ we observe, that there is no linguistic connection between the original sign and the sign + *gun\u0167i*.

The third and last great contribution filling the first autographed volume of Barton's work is his cuneiform palaeography embodied in a complete survey of a list of 627 signs. Barton is here indebted to Thureau-Dangin as regards the identification of many archaic signs with the Assyrian ones (see above p. 191). For each sign the material is arranged in three columns: the earliest form of the sign (often pictographic) / the variant column, in which the forms of the signs in the various periods are given in chronological order, often with references to individual occurrences, from the archaic to the Neo-Babylonian era / the normal Assyrian form. So as also to make this enormous material available there are then detailed indexes for each of the 627 signs in each of the chief periods. In an "Index of Pictographs"³ he has registered Part II's principal results which we mentioned above. How significant a contribution Barton's variants of the cuneiform signs was will best be seen by a comparison with the first of this kind of works, A. Amiaud and L. M\u00e9chineau, *Tableau compar\u00e9 des \u00e9critures babylonienne et assyrienne archa\u00efques et modernes . . .* (1887, ²1902), in which the variants of 296 signs are given. There are only a few, for in 1887 it was in the main Neo-Babylonian and Assyrian texts that had been published, and the wealth of texts and consequently of sign variants which had been issued in 1913, were not available at Amiaud's time. Thus there are no Kassite variants any more than variants from the I. Babylonian Dynasty.

Barton's work was continued mainly by two researchers: E. Unger (1920;⁴ 1929) and Anton Deimel. The latter began his palaeographic investigations in 1922 by presenting an identification of 814 signs from the texts of the Fara excavations, texts of an archaic character, with the

¹ *The Origin and Development of Babylonian Writing* I (1913), p. XI.

² *Ibid.* I, p. XIII.

³ *Ibid.* I, pp. 174-186.

⁴ *Babylonisches Schrifttum* (1920) enumerates 97 sure picture signs the original meaning of which is established.

well-known Assyrian signs.¹ Since then Deimel has with incredible industry and often with great acuteness tried to find out the original pictorial forms of the cuneiform signs. As a kind of supplement and an attempt to arrive at more correct results than those submitted by Barton in his "Index of Pictographs" (see p. 194) he published his *Keilschrift-Palaeographie* (1929), in which the original pictorial character of 245 signs was demonstrated. In numbers he did not surpass Barton's "Index", but in the sub-division of the material as well as in the more precise formulation he has surpassed him. In his investigations Deimel constantly reverted to the question as to the pictorial origin of the signs, and made alterations as well as increasing the number of signs which he could refer with certainty to pictographs; compare e. g. his *Šumerisches Lexikon* II₁₋₄ (1928-33) and especially his *Šumerische Grammatik* (1939). In the latter work Deimel revised his conception of the pictorial origin of several signs, partly under the influence of the Uruk texts (see p. 187). These had been published by A. Falkenstein in *Archaische Texte aus Uruk* (1936; *Ausgrabungen der deutschen Forschungsgemeinschaft in Uruk-Warka* II), which presents a list of signs filling 216 pages with 940 numbers, 163 of which are identified with well-known Assyrian signs. In 1940, Maggie Rutten in *Notes de paléographie cunéiforme*,² on the basis of the archaic texts from Uruk, Jemdet Nasr, and Ur (see p. 187) tried to determine the pictorial signs from these compared with the Neo-Assyrian.

It will, however, be obvious to any one who has followed the development in the palaeographic investigations, as regards the tracing of the signs to pictorial units, from Oppert (1859) to Deimel (1939), that even if many of the observations set forth can be accepted, it must be regarded as excluded that there should originally have been, as a foundation for the c. 600 simple signs that we know, a similar number of pictures which then in the course of time were transformed into cuneiform signs. Not all signs can be traced back to pictographs, and a close consideration of the names³ of the cuneiform signs as we know them from the syllabaries afford no aid to a further understanding. In 1913 Barton⁴ realised that the evolution from a limited number

¹ *Liste der archaischen Keilschriftzeichen (Die Inschriften von Fara I; WDOG 40, 1922).*

² *Revue des études sémitiques et Babyloniaca* 1940, pp. 1-53.

³ See V. Christian, *MVAG* XVIII 1 (1913).

⁴ *The Origin and Development of Babylonian Writing I* (1913), pp. XV-XIX.

of pictographs, whose amount no one can establish with certainty, had taken place in four different ways: 1. By simplification and conventionalisation of the pictographs. 2. Through the formation of new signs by combining pictographs. 3. By the creation of signs through the survival of variant forms of a single pictograph. 4. By the blending of two or more original pictographs into one sign. These theoretical considerations I can accept on many points, but I am of opinion that the actual development to the large number of individual cuneiform signs we know (c. 600) has taken place through a combinative system at a time when every trace of the original pictorial character of the signs had vanished. And to this must be added two very essential points to be taken into account when the historical account is to be written some day. (1) We must here in the first place keep in view that the Sumerians, who invented the cuneiform writing, had in the course of time, through a linguistic evolution which we cannot follow, fined down their language so intensely that the bulk of it consisted of monosyllabic words, so that the elision of various final consonants produced a number of homonymous syllables which were the equivalents of words of disparate meanings. Thus, according to Deimel there exist in all 23¹ different syllables (words) *du*. One of these signs can be traced to a picture of the human leg below the knee, and meanings such as "stand, still, walk" can be ascertained through the syllabaries and intensive text studies. But the relation between this *du* and the remaining 22, with the same phonetic value but a different semasiology, hardly depends on combinative and analogic formations, but on the fact that originally different monosyllabic words of the type *dun* by the dropping of final consonants have become phonetically uniform. (2) The second point denotes exactly the opposite movement to that described above, the starting point for the meaning of the sign being its sound, not the more or less pictorial character of the sign itself. The similarity of syllabic sound is here decisive. If one passes in review all the meanings of Sumerian words expressed e. g. by *mu*, one will realise that, besides the dropping of final consonants mentioned under (1) above, entirely disparate meanings have been expressed by the same sign through sound analogy with homonymous Sumerian monosyllables. This second point is well known e. g. from the Egyptian

¹ R. Labat, *Manuel d'épigraphie akkadienne* ... (1952), pp. 252, 278 dismisses *du₁₁*, *du₁₂*, *du₁₃*, and *du₁₄*.

hieroglyphic writing, and through this analogy of sounds, amongst other things, abstracts, pronominal suffixes, and grammatical elements of every kind are expressed. These two different movements in the relation between script and sound: the dropping of final consonants creating a multitude of homonymous signs of quite dissimilar appearance, and sound analogies which through a single particular sign express a multitude of meaning values, must constantly be kept in mind and act as a curb to the belief that all signs had a pictorial origin.

Barton's fundamental list of variants of all the cuneiform signs known in 1913 has since been augmented through the works of two researchers, owing to the considerable increase of texts and so of our knowledge of new variants since Barton's publication saw the light: Samuel A. B. Mercer, *A Sumero-Babylonian Sign List . . .* (1918; *Columbia University Oriental Studies XIV*), which only contains two lists of signs: (1) Archaic, (2) Ur-Nina – Neo-Babylonian, with the most important sound values and statement of periods appended (1–6, but without specification); it may occasionally be of advantage to the investigator that all the principal variants of signs which are not pictorial are collected in one sign alphabet. All previous sign variant lists are surpassed by Charles Fossey's gigantic work *Évolution des cunéiformes* (1926; *Manuel d'Assyriologie II*) which catalogues 35,438 variants, but the use of this unique work is hampered by the lack of chronologically arranged indexes. In this particular Barton had also, as already mentioned, greatly increased the usefulness of his work to students by adding detailed indexes of the variant collection. Of monographs dealing with the palaeography and sign variants of limited periods I may mention H. V. Hilprecht, *Old Babylonian Inscriptions chiefly from Nippur II* (1896), pp. 33ff.; Franz Bayer, *Die Entwicklung der Keilschrift . . .* (*Orientalia Num.* 25, 1927), which describes the development of the archaic signs from the time of the I. Babylonian Dynasty, including Hittite cuneiform signs, down to the time of the Arsacids, and Nik. Schneider, *Die Keilschriftzeichen der Wirtschafts-urkunden vom Ur III . . .* (1935).

Barton's indexes are based on a division of the cuneiform signs then known into 7 schools of script, or rather ductus, and his grouping can in many ways be said to be acceptable nowadays, only his division lacks the archaic period prior to his earliest period, and fails to take account of Hittite and Seleucid variants. On these three points

Deimel's abovementioned works have formed a supplement to Barton's, especially in *Šumerisches Lexikon* (1925-37), so that we can now establish the following provisional table in chronological order of the different ductus within the Sumerian-Babylonian-Assyrian cuneiform script:

1. Archaic (i.e. pictographs and the Fara texts).
2. Ur-Nina – Manishtusu.
3. Sargon – Gudea.
4. Ur III Dynasty.
5. 1. Babylonian Dynasty.
6. Kassite.
7. Hittite cuneiform writing.
8. Assyrian.
9. Neo-Babylonian.
10. Achaemenian-Babylonian.
11. Seleucian (and Arsacian)-Babylonian.

Besides the Mesopotamian cuneiform writing, used by the Sumerians, Babylonians, and Assyrians it may finally be mentioned that, with the latter as a starting point, the cuneiform script was also used by other peoples settled in regions east, north, or west of Mesopotamia, enumerated in chronological order: (1) the Elamite cuneiform, whose youngest stage is the Susian script (see p. 132), (2) the Hittite-Asia Minor script (c. 1500 B.C.), written in Babylonian cuneiform, whereas the Elamite is a variant of the Sumerian (see above p. 131), (3) the Syrian Ras Shamra script (c. 1300 B.C.) which is evolved from the Babylonian cuneiform to a purely alphabetical script, (4) the Chaldian script used in Urartu, the Assyrian name for the state in the Armenian mountains in the 9th century B.C.; it had developed from the Assyrian cuneiform, and finally (5) the Old Persian cuneiform used in the monument inscriptions of the Achaemenians. On the origin of the latter there has been no lack of theories from 1851-52, when Oppert¹ revised all the Achaemenian inscriptions, down to our day, but as this problem does not come within the scope of our subject, we have not entered into it. Acquainted with all the proposals that have been made, I agree with F. H. Weissbach when, in 1911, he says: "So, wie sich diese (i.e. the Persian cuneiform

¹ See *J.As.* IV sér., I, 17-18 (1851), I, 19 (1852), and above p. 122^a.

writing) uns jetzt zeigt, kann ich sie nur als ein selbständiges, frei erfundenes, künstliches Gebilde betrachten, das den älteren Keilschriftarten lediglich die Schriftelemente (Keil und Winkelhaken) entlehnt hat."¹

§ 4. How the cuneiform script was written on monument surfaces, reliefs, or on clay tablets has been described at length in other works,² to which the reader is referred for details. Here we shall merely point out the following broad features. Monument inscriptions in soft stone or on stones of ordinary hardness were probably engraved with a chisel of metal if the stone was soft enough, otherwise with a flint; inscriptions on metal (e.g. Balāwāt) or ivory were no doubt executed in the same way. How diorite inscriptions were engraved we do not know. For the monument inscriptions drafts were first made on clay tablets which were used as aids and guides to the engraver. By far the predominant number of our Mesopotamian cuneiform texts are written on clay tablets which, after the writing had been inscribed in the soft clay, were hardened and baked in an oven or merely dried in the sun, unbaked, e.g. the large Sippar find of tablets as well as the extremely valuable Tell Abû Harmal tablets (see p. 186).

In order to write the cuneiform signs in wet soft clay a special implement was made, a stylus, which the Babylonians themselves called *kan šuppi*, "tablet-reed". In writing, this was held between the thumb and index finger of the right hand, or between the thumb and the other four fingers closed round it, as may be seen amongst other things in Assyrian reliefs found e.g. in Tiglathpileser III's palace at Nimrūd, and from Sennacherib's palace in Nineveh. Under the microscope marks of reed-fibre have been found in signs on actual tablets, hence we know that neither flint, bone, or wood were used for the stylus but reed. Such serviceable reeds with a hard sheath and a tough fibre were found in profusion in the whole of Mesopotamia. But such a reed stylus became blunt at the point after some time and so a special kind of whetstone was used to sharpen them. In the earliest times there were two kinds of stylus,³ one ending in a cir-

¹ *Die Keilinschriften der Achämeniden* (1911; VAB III), p. L.X.

² e.g. A. Deimel, *Keilschrift-Palaeographie* (1929), pp. 1-7, and especially G. R. Driver, *Semitic Writing* ... (1948) pp. 1-16.

³ As to supposed finds of the Babylonian stylus during the excavations as well as pictures of it in sculptures as also scholars' attempts at a reconstruction of it, see Driver, *ibid.* pp. 19-26.

cular surface used for writing numbers, and another which later was the one commonly used, with a more or less wedge-shaped point. The latter assumed another form in the course of time. The earliest texts from Kish e.g. are written with a very sharp and pointed stylus, but gradually the point became broader with an edge angle of from 45° to 95° in the time of the Ur III Dynasty. In Neo-Babylonian times the angle was 80° . We can hardly point out any definite rule for the way in which the writing was placed on the surface in the pictographic and younger archaic period, but from Sumerian historical times the following applies to monumental inscriptions: the signs were written vertically, from above downward after the surface to be inscribed had been divided into horizontal bands and these then divided again from right to left into sections or parts, e.g. the Gudea inscriptions, Hammurabi's law code. But after the Kassite age, for reasons unknown, the bands were turned to the left through an angle of 90° , and were thus transformed into vertical columns, and the sections into lines running left to right. In pictorial and other archaic texts the stroke is dominant in the signs, and after the beginning of historical times it continued to appear, thus whenever the inscription was executed on stone or other hard material; whereas the wedge shape was used extensively for the first time on clay tablets in the period Sargon-Gudea.

§ 5. The Sumerian writing originally consisted of (1) simple pictograms, (2) composite pictograms with a transferred meaning, and (3) the so-called *gunû*-signs, which probably originally expressed concrete shades of meaning as compared with the original non-gunnated pictogram. The evolution from pictographic signs to cuneiform was facilitated partly by the fact that the writing material was clay, ill-suited for precise drawings and curved lines, partly by the new direction of the writing on clay tablets dating from the Fara period after which the writing runs from left to right, while at the same time all pictograms are rotated 90° to the left.

When the Akkadians took over the Sumerian cuneiform writing¹ two main tendencies asserted themselves. (1) The number of wedges was reduced within the individual signs; (2) a normalisation of the signs was attempted, its principal wedge elements being taken into

¹) With regard to the sketch below I am indebted to R. Labat, *Manuel d'épigraphie akkadienne* (1952), pp. 7-32.

account. A difference is seen to exist here between Babylonian and Assyrian cuneiform. The former is treated very freely and the variants are numerous compared with the original Sumerian sign, whereas Assyrian has become fixed in a stereotyped script in which the parallelism of the individual wedges has become accentuated.

The Akkadian cuneiform script consists of the following groups:

- a. Simple signs, e.g. *an*, *ša*₂.
- b. Reduplicating signs, e.g. *ai* (< *a* + *a*), *lah*₄ (< *du* + *du*).
- c. Composite signs, e.g. *akâlu* (Sumerian *ku*₂) "to eat" < *ka* "mouth" + *ninda* "bread" (= Akk. *pû* + *aklu*).
- d. *gunû* signs, e.g. G1R: Sum. *peš* = Akk. *âru*, *libbu*, *rapâšu*; the corresponding non-gunated sign IJA: Sum. *ku*₄ = Akk. *nânu* "fish".
- e. *nun* signs, e.g. *agargara*₂ < *nun* + *ha* = Akk. *agargarû* "shoal of fish".
- f. Ligatures, e.g. Old Babylonian *a* + *na*; *an* + *en*; Middle Assyrian *i* + *na*; Seleucid *marû* *ša*₂^m.

As to the Sumerian values of the cuneiform signs these are as a rule ideographic, but one and the same sign can be read in Sumerian in several ideographic ways, e.g. KA: *ka* (Akk. *pû* "mouth"); *inim* (Akk. *amâlu* "word"); *dug*₄ (Akk. *ḫabû* "speak"), *zu*₂ (Akk. *šinnu* "tooth"); *gu*₃ (Akk. *šašû* "cry"). However, there is in Sumerian also a pronounced tendency to use the cuneiform signs to represent syllables, and not words alone, since the prefixes, infixes, and suffixes are to be expressed by the script, e.g. the verbal prefix *al-* is expressed by the sign *al* "hoe, spade"; the use of it is purely phonetic, and the original meaning of the word stem has no influence on its isolated purely phonetic use as the verbal prefix *al-*.

Since the Semitic-speaking Akkadians use the Sumerian cuneiform writing to express their special idiom the purely phonetic development is accentuated, though ideographic modes of writing are not abandoned. Partly exigencies of time and space (e. g. in seal inscriptions) would favour an ideographic mode of writing, partly the wish that the religious ritual, as esoteric, might be withdrawn from the profane eye. But in the endeavour to find a sufficient number of phonetic values to cover the idiom of their language there were two difficulties for the Akkadians

to surmount. I. The homonyms of the Sumerian language were numerous and often monosyllabic, e. g. nine *a*'s, fourteen *ku*'s; of these numerous homonyms one *a* or *du* only is necessary for the Akkadian idiom, while the Sumerian dissyllables (*dingir*, *buluḥ*, *lagab*) are incongruous with Semitic Akkadian as phonetic values. The Akkadians keep solely to the monosyllables and abolish a great many of the homophones, it is only later that their number is increased (see below). II. From a phonetic point of view Sumerian and Akkadian differ in the fact that *l*, *š*, and *k* are lacking in Sumerian, where likewise only *z*, *s*, and *š* are at disposal for six Akkadian spirants, while in addition Sumerian *ḥ* must alone serve to cover phonetically Akkadian *ḥ* and *'*.

In order to get over these two central difficulties the Akkadians managed as well as they could in the following way:

1. Initially they expressed the emphatic Semitic sounds *l*, *ka*, *š* and *ki*, *ku* by *d*, *ga*, *z*, and *ki*, *ku*.
2. By borrowing Sumerian ideographic monosyllables of the type consonant + vowel + consonant for purely phonetic purposes, e. g. *kuš*, *gub*₂.
3. By using Akkadian ideographic readings phonetically, e. g. *šab* < *šábu* "soldier"; *šir* < *šíru* "serpent"; *mat* < *mātu* "land".
4. By letting phonetic sign values have the value of several vowels, e. g. *aḥ*, *iḥ*, *uḥ*, or letting them be read with alternating consonants, e. g. *mat*: *nat*, *lat*, *šat*, etc.
5. By forming new phonetic values by apocope of a final consonant or an initial vowel, e. g. *lam*₂ > *la*₄; *utu* > *tu*₂.
6. By enlarging final vocalic sound values by *-m* to express the grammatical relation mimation, which is later abandoned, e. g. *ru*₂ > *rum*; *su* > *sum*₃.
7. By separating *'* and *ḥ* in the script by two signs, one having arisen by a division of U \bar{H} .

The result of the Akkadian endeavours to express their idiom by means of the Sumerian cuneiform script has in the course of time, from Sargon I (c. 2300) to Arsacid times from about the beginning of our era, graphically as well as grammatically, been expressed in various different ways, but summing up we may say about the relation between Akkadian script and language that the cuneiform signs are read (1) phonetically, (2) ideographically, and (3) are used determinatively or as (4) phonetic complements.

(1) The phonetic signs (syllabograms) may have a polyphonic significance, either as a result of the coinciding of two or several signs, e. g. *bad* "to open" (Akk. *pīlū*) and *lil* "be complete" (Akk. *gamāru*), or most frequently being created by the Akkadians themselves, e. g. KUR: Akk. *mātu* "land", *šadū* "mountain" has the polyphonic values *mat* (*d, l*), *šat* (*d, l*) *nat*, *lat*, etc.—Several phonetic signs are common to the same sound. The homophony is derived from the homophones of the Sumerian language, which the Akkadians increased according as they needed it. The types are open syllables such as *ab*, *da*, closed syllables such as *har*, *mur*, rarely disyllables such as *tara* (two Akkadian signs have this phonetic value).

(2) The ideographic signs (logograms) are as a rule simple, e. g. *kur*: Akk. *mātu*, more rarely composite, e. g. *ur-maḥ*, Akk. *nēšu* "dog + large", i. e. "lion"; *anše-kur-ra*: Akk. *sīsu* "the foreign country's ass", i. e. "horse". Crypto-ideograms and the esoteric use of ideograms have been demonstrated.

(3) Determinatives are prefixed, as *ilu*, *mātu*, *šadū*, or suffixed as KI: *iršitu*; ḪA: *ku*₆ = *nūnu*; the grammatical determinatives (plur., dual., numerals) are derived directly from Sumerian.

(4) The use of phonetic complements as a guide to the understanding of the ideographic mode of writing would seem to be inherited from the Sumerians who write AN-*ra*: *dingir-ra*, AN-*na*: *an-na*, to distinguish between the two meanings of AN, "god" and "heaven". Likewise the Akkadian: KUR-*u* = *šadū*, KUR-*tim* = *mātim* or *iršitim* and furthermore, since KUR also in Sumerian has the sense "to conquer", Akkadian *kašādu*: KUR-*ad* = *ika(š)šad*, KUR-*sud* = *ikšud*. Phonetic complements are also found medially or even initially.

In the writing neither the individual words nor the sentences are divided, though the sign DIŠ is used in Omina texts to indicate the beginning of a sentence, just as it often denotes proper nouns. Sandhi is known in a few instances, e. g. *ša-tur-ri* from *šāl urri* "morning-time". A vowel written twice may denote a long vowel *la-a-bu* = *lābu*, whereas in instances like *ik-šu-ud* we should read *ikšud*. A long vowel in the final syllable is excluded for grammatical reasons.

As to the writing down of the individual words in so far as they are written purely phonetically it is important to note the two following normal types:

A. *i-kaš-šad*
ik-šud

B. *i-ka-aš-ša-ad*
ik-šu-ud;

here the B-type is the result of a complete phonetic articulation of respectively present and preterite forms of *kašādu* "to conquer". From this we can see the following rules: (1) trisyllabic and plurisyllabic words are divided according to syllables in the verbal formative elements, whereas (2) in dissyllabic words these enter into the initial syllable; (3) in dissyllabic words the first syllable ends with and the second syllable begins with a consonant.

From these rules there are two exceptions. Partly we have modes of writing such as *il-lik-am*, *i-kaš-ša-ad-u*, as *-am*, *-u*, the ventive and plural endings, being felt to be independent as formative elements and therefore do not come under the above-mentioned rules. And partly we have cases such as *iš-al*, *iš-am*. It is most important to note such modes of writing since it appears clearly from the above-mentioned rules that here we should read: *iš-'al* and *iš-'am*, or that the Akkadian cuneiform has thus been provided with a means of expressing the laryngeal reduction product of the Akkadian idiom.

CHAPTER V

THE LANGUAGES

§ 1. Akkadian

(cp. Chapters III §§ 9 and 11 and IV §§ 3 and 5)

A.

The Akkadian languages¹ with the two main dialects Babylonian and Assyrian, form a special group within the Semitic languages. The term East Semitic is often used about it. There is much to indicate that Akkadian, earlier than the other Semitic languages, became differentiated from primary Semitic; thus the special character of the Akkadian verbal tenses would seem to suggest this. But the distinctive character of Akkadian is also in great part due to purely historical conditions; the Semitic-speaking immigrants into Mesopotamia here found a highly developed culture among the Sumerians whose language was of an entirely different nature which, to this very day, has not by any convincing argument been shown to be related to any other language known to us. The Sumerians gave expression to their language in the distinctive cuneiform writing, which had been evolved from a picture writing, and this writing was adopted by the invaders who ruled Mesopotamia from the time of the 1. Babylonian Dynasty. Here the Semitic idiom, merely known to us as it is expressed in the cuneiform writing, suffered the fate of having its pronunciation adapted to the writing system of the vanquished in the script. Now we all know that no writing system, not even the alphabetical system is capable of fully expressing the richly shaded sounds of a living language, even though supplementary signs, among e. g. the Mongolian and the Indian peoples are introduced in an attempt to remedy the defects of the original ancient Semitic alphabet, now adopted and further developed almost by all. But it can be said with certainty that as a means of

¹ See further below p. 218, 218¹.

expressing a Semitic idiom, the Sumerian cuneiform writing is ill-suited, unpractical, and partly directly disintegrating.

The relation between the written and the spoken language is a crucial point in philology wherever the question is raised, but as far as Akkadian (and Sumerian) are concerned the problem is a purely academic one, for we entirely lack any basis for a comparison between writing and speech; we merely know the written language and cannot form any conjecture as to whether or not there was a gulf between writing and speech. And even though we can thus only study the language of the written texts, we have nowhere any hint of what we might call the officially adopted standard of written language. In the royal inscriptions, e. g. Hammurabi's law code, the war records of the powerful Assyrian kings, Nebuchadnezzar's building inscriptions, we may suppose that we meet with the codified official written language and can presumably also base our impressions of the grammatical and syntactical structure of Akkadian on such official documents. But in the epistolary literature we encounter numerous deviations from the official idiom. To state freely, however, that we have here the elements of the colloquial language and so in part more fined down grammatical forms, would, I think, be going too far. The inhabitants of Mesopotamia could neither read nor write; as far as the 90 p. c. of the population were concerned they were at the same stage as the peoples of France until 1850. It is merely the language of the scribes we know, and this again is based on the language of the writing schools.¹ Only a study of the idiom of the various schools can inform us whether the deviations from "the official language" are of a local character, due to dialect, or whether they are due to the linguistic form of the schools. In Assyriology no systematic enquiry into this problem has as yet been begun. But sooner or later the very large number of texts must be studied regionally, according to the locality where they were found, the contents being relegated to the background. And the grammar, syntax, and semantics of e. g. the texts from Assur, Larsa, Sippar, or Tell Abû Harmal must be written. When such a corpus of grammatical investigations has been provided a comparison with the official language of the royal inscriptions may be possible. It should be kept in mind, however, that the latter do not constitute a solid and firm body of material. From Hammurabi to Nebuchadnezzar we have a development of more than

¹ Cp. I. J. Gelb, *JNES* VIII (1949), p. 348.

a thousand years to take into account, while we also meet pronounced differences in the northern state, Assyria. Thus Ashurnasirpal II (883–59) writes Neo-Assyrian, whereas the great kings succeeding him are so strongly under the influence of the southern state and its language that their official inscriptions may be counted as written in Neo-Babylonian, whereas the script is entirely Assyrian. But this again means that the very large finds of texts from the library of Ashurbanipal were written in a more or less official artificial language which has nothing to do with the old official language or perhaps the spoken language of the time. The same in a way applies to the last period of the southern state. In script and language Nebuchadnezzar imitates the ancient style; often we cannot admire the result which occasionally impresses us as a failure. From these examples we may conclude that in speaking of "the official written language" as well as the "living colloquial language" of the letters researchers run a great risk.

Akkadian may be described from a purely empirical-systematic point of view, taking into account all observed variants and deviations, in paragraphs, sub-paragraphs, and notes, from a conjectured normal form, or rather from the form which, by virtue of the largest number of passages alleged in proof, must be regarded as the prevalent form. Wolfram von Soden¹ has done this most completely of all Assyriologists in 1952; but in addition he has throughout taken into account the six historically known sub-divisions of the two main groups of Akkadian: Babylonian and Assyrian (see p. 187). By this means a more complete listing of our grammatical knowledge has been contrived than that of Friedrich Delitzsch in his work of 1906,² which was in the main based on Neo-Babylonian and late Babylonian texts. W. v. Soden's work has added to our knowledge and provided a comprehensive view of the different grammatical forms in existence. It rests on such solid foundations as Arthur Ungnad's *Codex Hammurabi* studies,³ Benno Landsberger's acute grammatical investigations⁴ published in the course of the last 30 years, as well as other important mono-

¹ *Grundriss der akkadischen Grammatik* (1952; *Analecta Orientalia* 33).

² *Assyrische Grammatik mit Übungsstücken und kurzer Literatur-Übersicht* (1906; *Porta Linguarum Orientalium* X). The 1. edition was published in 1889.

³ *ZA* XVII (1903), pp. 353–78; XVIII (1904), pp. 1–67.

⁴ Here we only mention the paper on the ventive (*ZA* XXXV (1924), pp. 113–23) and refer the reader to the bibliography of Landsberger's works mentioned above p. 172.

graphs and papers.¹ In addition von Soden has included in his researches ancient Assyrian (e.g. the Kül Tepe texts) which since the publication of texts in 1920 and subsequent years² has been subjected to fundamental investigations, among others by Julius Lewy.³ And for a purely historical Akkadian grammar, which we still lack, we have an excellent starting point in von Soden's work; the regional differences will also one day be given their place in the historical account.

B.

As regards the relation of the Semitic idiom to Sumerian we can only speak with caution. That Akkadian contains numerous Sumerian loan words is a matter of course;⁴ the Semitic nomads adopted a thousand-year-old culture with a great number of its terms for those cultural conquests which were unknown to the Semites before they settled in Mesopotamia. Conversely, the Sumerians seem only to have borrowed few words from the Semites.⁵

Akkadian, on the other hand, appears to be little influenced by the construction in grammar and syntax of the Sumerian language, whereas the Semitic articulation of their speech sounds (phones) can hardly have escaped a certain influence. Here, of course, we are on unsafe ground as we have only the writing to go by. As regards the Sumerian grammatical influence we may here refer to the Akkadian verbal stems formerly called medial and passive, which are formed of the primary verb (basic stem) by inserting the infix *-la-* denoting a change of direction, as well as of the intensive (factitive), causative, and passive stems. In 1936 A. Goetze⁶ called attention to a possible dependence on the special character of the Sumerian verb. I agree with him, but I do not

¹ Cf. von Soden's bibliography in *Grundriss der akkadischen Grammatik* (1952), pp. XXII-XXIV.

² *Tablettes cappadoeciennes* publ. p. G. Contenau, F. Thureau-Dangin et J. Lewy, 1.-3, sér. (1920-37; *TCL* IV, XIV, XIX-XXI); Sidney Smith, *Cuneiform Texts from Cappadocian Tablets in the British Museum* 1-IV (1921-27); B. Hrozný, *Inscriptions cunéiformes du Kultépe I* (1952; *Mon. Acch. Or.* XIV). Cp. also below pp. 218¹, 332¹, 581.

³ e.g. *Das Verbum in den "altassyrischen Gesetzen"* (1921) and *Studien zu den altassyrischen Texten aus Kappadokien* (1922).

⁴ Cf. P. Leander, *Die sumerischen Lehnwörter in Assyrischen* (1903), which enumerates 240 loan words, and especially Carl Bezold, *Babylonisch-assyrisches Glossar* (1926), which with the note: "(sum. LW.)", under the individual alphabetically arranged words gives the result of the latest investigations (up to 1926).

⁵ Cf. Friedrich Delitzsch, *Sumerisches Glossar* (1914), p. 296.

⁶ *The l-Form of the Old Babylonian Verb* (*JAOS* LVI (1936), pp. 297-334).

believe that the relation to Sumerian is a merely semasiological one, showing "a modification of the basic verbal idea", but I think that the insertion of the infix exhibits a direct verbal influence from Sumerian. As regards the *modus energicus*, as Ungnad¹ calls it, which following B. Landsberger,² we call *ventive* (for more details see pp. 210 and 229), Landsberger has declared that it is "den übrigen semitischen Sprachen völlig fremd"³ and, defining the *ventive* as expressing differences in the direction of movement, he refers to Sumerian, in which Thureau-Dangin⁴ has shown the bearing of the prefixes on the direction of movement, undoubtedly a correct observation, though Akkadian has an affix here.

As regards the syntax, voices have been raised in several quarters in favour of the idea that the position of the verb at the end of the sentence is due to the influence of Sumerian on the Semitic idiom; this cannot, however, be conclusively proved, especially since it must be said about Akkadian that the position of the individual parts of the sentence is free, even though the parts governed by the verb usually precede the verb.

With respect to the articulation of the speech sounds in the Semitic idiom we may establish two facts: partly that the Sumerians possessed no laryngeals in their language, partly that Akkadian, in contrast with all the other Semitic languages, has lost the original primary Semitic laryngeals. To ascribe this entirely to the cuneiform writing would hardly be reasonable. If laryngeal sounds were used in colloquial language from Hammurabi's to Nebuchadnezzar's time it is an obvious conclusion that the Semites, among the great multiple of Sumerian cuneiform signs, would have been able to use and consciously designate about 5 signs for the laryngeals employed and pronounced by them. The loss of the laryngeals is not due to the script alone, but also to the daily influence from a people living among the Semites, i. e. the Sumerians, to whom the laryngeal speech sounds were unknown.

C.

Besides the relation to Sumerian, which will always remain the central problem, we shall here remind the reader that some time before

¹ *Babylonisch-assyrische Grammatik* (1906) p. 32; Fr. Deltzsch, *Assyr. Gr.* (1906), pp. 270-71 has not observed the finite forms with final -a as a special mood.

² *Der "Ventiv" des Akkadischen* (ZA N.F.1 (XXXV, 1924), pp. 113-123).

³ *Ibid.* p. 123.

⁴ ZA XX (1907), pp. 380-404, cf. A. Poebel's criticism ZA XXI (1908), pp. 216-36.

and under the Hammurabi Dynasty East Semitic Akkadian, owing to an invasion from the west, was influenced by Amorite, a West Semitic dialect of a Canaanite type.¹ We can trace this in a number of proper nouns composed of verbal forms in which un-Akkadian forms with a prefixed *ja-* occur, + *ilu*, god, besides a series of West Semitic loan words: *abdu*, slave; *šadûk*, right; *ezertu*, help; *agappu*, wing (of a bird), lateral part of a seat, throne; *jarru*, stream, river; *amittu*, knocker, pestle of a mortar, etc. But there was no great grammatical or syntactical influence from West Semitic.

D.

As a contribution to a general characterisation of Akkadian in contrast with the other Semitic languages, we may here set forth the following features before we take a broad survey of the linguistic structure of the Akkadian language.

(1) Loss of the laryngeals.

(2) *ša*-relative.

(3) *-la-*, *-lan-* verbal stems.

(4) The tenses of the finite verb (including permansive, which von Soden² calls stative).

(5) The subjunctive (*modus relativus*). Not similar in function to the subjunctive of other languages, but a kind of genitive ending of the finite verb.³

(6) The ventive (Landsberger,⁴ von Soden;⁵ Ungnad: *modus energicus*,⁶ later allative;⁷ Goetze:⁸ terminative), an inflected verbal mood.

To this must be added a number of other deviations, seemingly less characteristic, from the other Semitic languages, which will be mentioned in the following pages.

¹ Cf. Ed. Meyer, *Sumerier und Semiten* ... (Abh. d. K. Preuss. Akad. d. Wissensch. 1906); H. Ranke, *Early Babylonian personal Names* (1905) (*Bab. Exp. Ser. D II.*).

² *Grundriss d. akk. Gr.* (1952), pp. 100–101.

³ Cf. von Soden, *ibid.* p. 108.

⁴ ZA XXXV (1924), pp. 113–23.

⁵ *Grundriss d. akk. Gr.* (1952), pp. 107–08.

⁶ *Babylonisch-assyrische Grammatik* (1906) p. 32.

⁷ *Grammatik des Akkadischen* (1949), pp. 48–49.

⁸ JAOS LVI (1936), p. 298.

E. Phonetics.

I. As regards the vowels, the three primary Semitic vowels *a*, *i*, *u*, and their lengthened forms *ā*, *ī*, *ū*, have been augmented by *e*, *ē*, in Akkadian. We are not here thinking of *e* < *a*, e. g. under the influence of the surrounding consonants, as we know it from Arabic *šams*, sun, for **šams*, or Old Arabic *ʾišrāna* < *ʾašrāna*, twenty. Such cases are also known from Akkadian where moreover vowel-harmonic influences may assert themselves, thus *a* > *e* under the influence of another *e*, e. g. *epšētu*, deeds, instead of *epšātu*, and *a* can become *e* under the influence of sibilants and liquids: *šeḫru*, small, *šelaltu*, three. The vowel-harmonic development from *epšātu* > *epšētu* which we mentioned above only takes place in Babylonian, not in Assyrian, which has *epšātu*; *epāšu* (Bab. *epēšu*), *bēlāti* (Bab. *bēlēti*) etc. The Assyrian vowel harmony, on the other hand, consists in a vowel-harmonic transition of a short unstressed *a* to the colour of the following final vowel, thus Bab. *kaḫḫadu* is inflected in Assyrian *kaḫḫudu(m)*, *kaḫḫada(m)*, *kaḫḫidi(m)*. – Here, however, we are thinking of an existing *e* independent of the two above-mentioned sound processes; its possible origin will be discussed later. The relation of this *e* to *i*, their alternation, needs a thorough investigation, the problem being last treated in 1887 by Paul Haupt.¹ As regards the vowel colour of the original primary Semitic vowels, the so-called "graphies rompues", e. g. *it-la-zi-uz*, *ḫu-ru-aš*², have given rise to conjectures as to whether a spoken *o*, *oe*, *ū*, occurred in Akkadian.³ Thureau-Dangin reads *iš-ku-(i)n*, von Soden *iškūn*, but the matter has not yet been cleared up.

II. The stock of consonants has become reduced as compared with primary Semitic and Arabic, *s*, *š*, and *l* becoming Akkadian *š*; *z*, *ḏ* > Akk. *z*; and *ṣ*, *ḏ* > Akk. *ṣ*; as to consonantal bases which show two different emphatics Frederiek W. Geers' survey⁴ of the available material seems to indicate the following proposition: *š*, *k* > Akk. *š*, *k(g)*, e. g. **krš* > *krš*; *ṣ*, *f*, > Akk. *ṣ*, *l(d)*, e. g. *šrl* > *šrl*; and *k*, *l* >

¹ *The Assyrian e-Vowel* (Am. Journ. of Phil. VIII (1887), pp. 265–91; also published separately: Baltimore 1887).

² von Soden, ZA XLIII (1936), pp. 316 ff.; Thureau-Dangin, *Mededeelingen en verhandelingen . . . Ex Oriente Lux* Nr. 8 (1946), pp. 15–18; R. Labat, *Manuel d'épigraphie Akkadienne* (1952), p. 25; von Soden, *Das akkadische Syllabar* (1948; An.Or. 27), pp. 9, 102².

³ von Soden, *Vokalfärbungen im Akkadischen* (JCS II (1948), pp. 291–303).

⁴ JNES IV (1945), pp. 65–67.

Akk. *k*, *t*, e. g. *ktp* > *tpt*. The laryngeals have disappeared; only the Arabic Alif has been preserved and can in Akkadian be parallelised with the Greek spiritus lenis, *ʾ*, which is the common reduction product of the original laryngeals and can be expressed in writing either by a special sign created by the Akkadians by division of the Sumerian sign U₇, U₇U or by graphically broken forms such as *iš-al*, *iš-am* (see above p. 204) which must be read *iš-ʾal*, *iš-ʾam*; *ḥ*, the Arabic *Ḥā*, is no laryngeal like *ʾ*, but a palatal. Initially *i* and *u* have been dropped; *m* (in earlier times written with the sign P1) is very early pronounced as bilabial *w*. The voiceless stops (mute consonants) *k*, *p*, *t* seem later to have been aspirated, if we may rely on the Greek transcription where these three sounds are represented by *χ*, *φ*, *θ* (e. g. *atappu*, *atāpu* = *aθaφ*) whereas Akk. *k* is reproduced by the Greeks as *κ* and *t* as *τ*.¹

III. The most essential fact of all, however, is the loss of the laryngeals, these sounds (besides Alif): *Ḥā*, *ʾAin*, *Ġain*, and *Hā* being highly characteristic of the Semitic languages. In Mandaean, too, the easternmost branch of W. Semitic Aramaic, the laryngeals have been lost, but the texts are of late date, from about the beginning of our era, or later. In 1919 I pointed out,² in connection with the loss of the Mandaean laryngeals, that a similar loss was known from the Indo-European languages, according to the fundamental investigations of F. de Saussure (1879)³ and Herman Møller (1880, 1906, 1917),⁴ which have been carried on by other investigators in the 20th century,⁵ amongst other things owing to their impressions of the Indo-European Hittite language and its stock of sounds. The Indo-European laryngeals "were gradually weakened or made away with through a number of sound changes, followed by different vowel alternations".⁶ That in Indo-European the latter were dependent on the accent was also pointed out.

¹ Cf. A. Ungnad, *Gram. d. Akk.* (1949), p. 10.

² *Mandäische Studien* I (1919), p. 296²; for English translation (1926) see below, note 6.

³ *Mémoire sur le système primitif des voyelles dans les langues indo-européennes* (1879).

⁴ *Beiträge z. Gesch. d. deutschen Sprache u. Litt.* hrsg. v. H. Paul u. W. Braune VII (1880), p. 492³; *Semitisch und Indogermanisch* I (1906); *Die semitisch-vorindogermanischen laryngealen Konsonanten* (1917).

⁵ e. g. Holger Pedersen (1909, 1938), A. Cuny (1909, 1910, 1912, 1942), J. Kurylowicz (1927, 1935); W. Couvreur (1939), H. Hendriksen (1941), E. H. Sturtevant (1942) and L. L. Hammerich (1948).

⁶ S. Palls, *Mandaean Studies* (1926), p. 214³.

Now the original Indo-European accent was musical like that of Old Arabic, which is not unimportant in our context, or according to Karl Verner's designation it was chromatic, *udâtta*, *anudâtta* and *svarita* denoting the different grades of accentuation; thus the shading e. g. of the vowel *a* to *e* under the influence of the *udâtta* accent, with *anudâtta* to *ʿ* (shwa), and with *svarita* to *o*. I have mentioned the occurrence of these vowel shadings in Indo-European as a consequence of the musical accent in order to give the reader an idea of the necessity of keeping in view the influence of the accent in the study of the original Akkadian laryngeal, which has now only left traces in the vowel changes.

What we know of the Akkadian accentuation is almost nil. The grammatical handbooks produce rules as a guide to the understanding; thus Ungnad¹ writes, "Der Wortton liegt vielleicht auf langer Ultima, wenn diese aus Kontraktion entstanden ist (e. g. *maḥrû*) . . . sonst auf der nächstvorhergehenden positions- oder naturlangen Silben (e. g. *iprusû*, *iprusânim*)"; von Soden says,² "Der Ton liegt am häufigsten auf der vorletzten Silbe, bei zweisilbigen Wörtern und Formen auch, wenn die kurz ist (z. B. *kûšud* "erreiche", dazu Stat. *kāšid*). Bei mehrsilbigen Wörtern und Formen zieht er sich auf die drittletzte Silbe zurück, wenn die vorletzte kurz ist (z. B. *ṣbatû* . . . *napišta-ka* "dein Leben"). Sicher endbetont waren endungslose Formen von hohlen Wurzeln . . . wie z. B. *idāk* "er tötete". It is questionable, however, whether objections cannot be raised against such rules.

In the fundamental stem, modified by the infix *-la-*, of the regular triradical verb the third person singular is the same in the present and the preterite: *iptaras*: *iptaras*. Ungnad³ points out that only the accent separates these two forms from each other. The same applies to the iterative *-lan-* stems.⁴ This conjecture is based on the observation of the doubling in the writing of the second radical, also in the present of the fundamental stem itself (e. g. *iparras*, *iptarras*, *iptanarras*); Ungnad therefore accentuates as follows: (*ipárras*), *iptárras*: pret. *ip-laras*; *iptanárras*: pret. *iptánaras*, drawing the conclusion that a secondarily developed double consonant is due to a preceding accented vowel. But this is circular reasoning in which the rôle of the double consonant

¹ *Grammatik des Akkadischen* (1949), p. 19.

² *Grundriss d. akk. Gram.* (1952), p. 37.

³ *Gr. d. Akk.* (1949), p. 58.

⁴ *Ibid.* p. 60.

is to be both cause and effect; and besides, Chr. Sarauw, calling attention to the Ethiopian imperfect tense, has pointed out that the gemination in the Akkadian present "aus dem Altsemitischen überkommen sein muss, von Haus aus ein charakteristisches Merkmal des Imperfekts war"¹. And further, the following facts may be pointed out: (1) The preterite often has a geminated 2. radical e. g. Ass. *amdaḥḥiṣ*: Bab. *amlaḥḥaṣ* (*a* > *i* in the last syllable is probably in Neo-Assyrian an analogical formation from the intensive and causative stems), whereas the preterite *iptarras* < **iptan(a)ras*. (2) In the stems where the gemination of the second radical is an integrating part of the modified fundamental stems, e. g. the intensive (factitive) stem, the script frequently has only a single consonant, e. g. *n-me-si* (Tiglpil. I, VII 76; VIII 5; Ashurnas. II, II 3); *u-ma-si* Sennach: Layard (1851), Pl. 33, 16); *unakis* (Sennach: Tayl. Cyl. V 85, but VI 2 *u-na-ak-kis*); *ndilū* instead of *uddilū* < *edēlu* (ibid. V 7). (3) *urepiṣ*: *urappiṣ* strongly urges us to be cautious, for the parallels *ubennī*: *ubannī*; *uṣekniṣ*: *uṣakniṣ* take us from the idea of an Akkadian ictus accent² to the possibility of a musical accent as in Old Arabic. The change from **a* > *i* > *e* was mentioned above on p. 213 as a result of the udātta accent. However, we dare not with certainty postulate an Akkadian musical accent since **a* > *e* may be due to a partial assimilation of *a* to the succeeding *i*.³

As far as I can see, the Akkadian word accent is not bound to any definite syllable of the word; it is free as in Ethiopian, even though as to position it may perhaps differ from primary Semitic. All that can be established with certainty is where the accent was not placed;⁴ by observation of the loss of vowels (e. g. *ṣabtu* < *ṣabitu*; *rapṣu* < *rapaṣu*) we see that the accentuation of the penultimate syllable is not implied in Akkadian as in the corresponding West Semitic forms where the final result is accentuation of the ultimate syllable (e. g. *kaḥāla* > *kaḥāl*).

Whether a musical accent originally prevailed in Akkadian may perhaps be found out by an investigation of the loss of the laryngeals and the accompanying vowel alternations which here precede the other

¹ Cf. Chr. Sarauw, *Über Akzent und Silbenbildung in den älteren semitischen Sprachen* (1939), p. 43.

² von Soden, *ibid.* p. 36.

³ Thus Ungnad, *ibid.* p. 11 and von Soden, *ibid.* pp. 115, 117.

⁴ Cf. Chr. Sarauw, *ibid.* p. 47.

Akkadian sound changes. Such an investigation has not yet been made, von Soden¹ in the main leaves the reader in the lurch. Only Fr. Delitzsch² has seen that there is a problem here, but he merely distinguishes between "á in welchem ein ' quiesziert" nad "á in welchem kein ' quiesziert" whereas the initial *e*-sound is only pointed out in connection with lost laryngeals. The observations put forward may be summarised as follows: (1) All original laryngeals become ' , (2) **a* > *e*, wherever it was originally preceded or followed by one of the sharp laryngeals (Há, 'Ajin, Ġain).

My results are as follows: (1) *Any arbitrary vowel + **a* laryngeal > a long vowel, varying in shade according to the intonation; with the udâtta accent we get á, í, secondarily ê, with the svarita accent we get ú, secondarily ó; the nature of the laryngeal only influences this where we have one of the three above-mentioned sharp laryngeals, e. g. bá'lu, with the only possible accent on the penultimate, > bēlu; i'but > íbut; 1. person singular a'kul > ákul; zi'bu > zību, compare *an arbitrary consonant + **a* laryngeal > consouant gemination or compensatory lengthening, e. g. hi'pu > hīpu or hīfu; assimilation may not occur, however, e. g. iś'al. But the long medial ê may also be derived from an *-aj-: ušajniḵ > ušēniḵ, whereas ja- > i-: *japrus > iprus. To cases such as êrub, írub the above-mentioned rule applies: *já'rub > *iêrub > êrub.

(2) **a* laryngeal + *an arbitrary vowel > a short vowel whose timbre is dependent on the intonation (see under (1) above), e. g. *'apšātu(m) > Ass. 'epšātu, Bab. 'epšētu; the stress should be on the penultimate since the feminine plural vowel is long, but the change of **a*- > *e*- would seem to indicate that it must perhaps be accented *'ápšātu; however, the nature of the laryngeal may alone have effected the change, as pointed out above under (1). That **a* laryngeal + an arbitrary consonant gives rise to consouant gemination is only known in the verb "to go": *i'lik > illik; the present illak; ittalak < i'talak but not in the causative stem form ušálik, where there is compensatory lengthening.

The difference in result due to the position of the laryngeal in relation to the vowel (and consonants) may depend on the place of the accent. Much work remains to be done before the relation of the Akkadian

¹ *Ibid.* pp. 24 ff.

² *Assyrische Grammatik* (1906) pp. 88-89, 94.

vowel alternations to the loss of the laryngeals is finally cleared up. But sooner or later the task must be undertaken of collecting the whole material concerning the words of which we know from comparison with the other Semitic languages that they originally contained laryngeals, and not only the stems, but all the known forms of all these words, since in each individual case reflections on a possible knowledge gained as to the accentuation will have to be included in the investigation. A prerequisite of this immense labour is an Akkadian Thesaurus, if the investigation is to be done thoroughly and not merely based on a couple of hundred examples. The two above-mentioned propositions rest solely on such a number. It must be the work of future research to confirm or reject them.

IV. As regards the vowel changes in Akkadian we here meet with the usual linguistic phenomena in the Semitic languages: (1) the influence of assonance, e.g. *epēšu* < *epāšu*;¹ (2) consonantal influence, especially starting from *r*, *h*, and in Assyrian also from *m*, e.g. **i* > *e*: *eragam* < *iragam*; *utanuneh* < *utammih*; *uninānāte* < *ummānātum*; *šume*, Bab. *šumī*, my name; (3) loss of a vowel between consonants, e.g. *rapšu* < **rapāšu*; (4) loss of Alif between two identical vowels followed by vowel contraction, e.g. *mādu* < *maʾadu*, (5) elision, e.g. *an ilānī* < *ana ilānī*; (6) shortening of all long final vowels when they have not arisen by contraction, and which are dropped in the late period; (7) coalescence of vowels, e.g. *šamē* from *šamajī*, which is not fully carried through in the earliest Assyrian and Babylonian texts, e.g. *rabium*; (8) crasis, which always takes place with the predicative particle *lā*, e.g. *lā + iprus* > *liprus*, but *lā + aprus* > *luprus* (1. person singular); as analogous to the 3. person singular (*liprus*) we may point out *lirid* < *lā + ūrid* and *liḫallik* < *lā + uḫallik*, whereas *lāḫib* (3. sing.) from *lā + uḫib* follows the usual rules for contraction; the particle *lā*, "indeed", with the preterite as historical tense in an intensifying sense, only undergoes crasis where it is followed by a *u*, e.g. *lāḫallik* < *lā + uḫallik* (1. person sing.); (9) vowel insertion, e.g. *unzunāšu* < *uznāšu*.

V. The consonantal changes under the influence of the consonants themselves take place by assimilation of the same character as that known from many other languages, e.g. *-np-* > *-pp-*; *-nt-* > *-tt-*; *-bm-* > *-mm-*; *-dt-* > *-tt-*; *-dš-* > *-šš-*; *-(z, ṣ, s)t-* > *-zz-*, *-ṣṣ-*, *-ss-*.

¹ See above p. 211.

Peculiar to Akkadian are, however,

1. *-rt-* > *-st-*, e.g. *šipirtu* > *šipištu*.
2. *s*, *š*, *š*, *z*, plus dental or sibilant > *l*, e.g. *aštur* > *alŕur*; *ašši* > *alsi*; exception: *napištu*.
3. *š* preceding dentals and sibilants becomes *s* (in an earlier period written *z*), e.g. *māšū* > *mātsu*.
4. Ass. *-št-* (also Bab. *-tš-*) > *-s-*, e.g. *aštakan* > (Bab. *altakan*), Ass. *asakan*.
5. *l* > *d* after *d*, *g*, and *m*, e.g. *amdaḥiṣ* < *amtaḥiṣ*, *tānidu* < *tāmtu*; *d*: *l* in the same word e.g. *ta-al-luṇi*: *da-al-lu* (S^a 1 14).
6. Dissimilation (parallel to the above-mentioned *-st-* > *-ll-*) is met with in the transition from *m* to *n* in radicals in which another labial occurs, e.g. **markabtu* > *narkabtu*, known from other Semitic languages (J. Barth's law¹). But exceptions occur, e.g. *māšabu*, *mušpālu*, *mudbaru*; the latter word, "steppe", is a W. Semitic loan word; perhaps the two other irregular words are formed on the analogy of this. Incidentally, the consonantal changes of *m* are extremely interesting; as far as we can judge, it early became pronounced as a bilabial *w* and coincided with the semi-vowel *u*. Preceding dentals and *š*, *š*, and *k*: *m* > *n*, e.g. *enku* < *emku*; **amtaḥar* > **antaḥar* > *attaḥar*, *-nt-* > *-tt-* (see p. 216). Between vowels *m* drops out in Neo-Ass.: *dumuzu* > *dūzu* and likewise finally, e.g. the dropping of the mimation and the ending of the ventive in a vowel (see p. 229).
7. *w* is preserved in Old Babylonian and Old Assyrian, but initially it subsequently becomes *'*, e.g. *walādu* > *'alādu*; *wašū* > *'ašū* (whereas Ass. has *wa-* > *n-*: *uṣā'u*); medially *w* > *m*, e.g. *awīlum* > *amīlu*, and is assimilated before a following *b*, e.g. *babālu* < *wabālu*.
8. A special section within the consonantal changes must be accorded to the relation of the laryngeals to the other consonants, which were mentioned above on pp. 214–216. We could there only deal with the interrelationship between the consonantal reduction product of all the laryngeals,² since it is hardly possible to formulate with any weight reflections on the influences of lost primary laryngeals. We have here nothing to add to what we said above, to which we refer the reader.

¹ ZA II (1887), pp. 111–117.

F. Morphology and Accidence.

I shall here merely point out the peculiarities of the Akkadian language as compared with the other Semitic tongues. Still I should like to emphasise that admittedly I have here and in the preceding part of this chapter spoken of Akkadian as if it were a language in itself, though indeed divided into two main dialects of a different grammatical character at different periods; moreover, the time from Sargon of Agade (2303) to the fall of Babylon (538) comprises about 1765 years. But necessity forced me to do so: partly because the aim of this chapter was to characterise Akkadian as a language amongst other things as compared with other Semitic languages, partly because of the lack of an historical Akkadian grammar. Such a grammar is not possible until a large number of monographs have been published in which individual sections of the above-mentioned long period of 1765 years are treated, and it will then be a history of language, not a grammar. A language is no fixed quantity and altogether can only be presented as a language at all, grammatically and syntactically, within this or that limited period of its lifetime. Hence a general Akkadian grammar which is not a history of the language will actually give a picture out of focus. And finally it is my experience that Akkadian is a language-group, not one or two languages, and that each of these languages should be thoroughly studied and described independently of the others. A number of investigators have since 1890 published treatises and investigations which form valuable building bricks in an account recording the historical development of the Akkadian languages.¹

¹ Old Akkadian: A. Ungnad, *Materialen zur altakkadischen Sprache* (MVAG XX, 1915) and I. J. Gelb, *Old Akkadian Writing and Grammar* (1952; *Materials for the Assyrian Dictionary* II). – The Hammurabi dialect: A. Ungnad, ZA XVI and XVIII (1903, 1904). – Old Assyrian: J. Lewy, *Das Verbum in den "altassyrischen Gesetzen"* (1921) and other important contributions to the understanding of the Kül Tepe texts from 1922–50. – Middle Babylonian: S. J. Bloch, *Orientalia* N.S. IX (1940). – Neo-Babylonian: K. L. Tallqvist, *Die Sprache der Contracte Nabû-naḏids* ... (1890); J. Ph. Hyatt, *Yale Oriental Series, Researches* XXIII (1941). – The Achaemenian dialect: O. Rössler, *Untersuchungen über die akkadische Fassung der Achämenideninschriften* (1938). – The Seleucid dialect: G. Goossens, *Musdon* LV (1942). – The eplie dialect: W. von Soden, ZA XL and XLI (1932, 1933). – The Amarna dialect: Fr. M. Th. Böhl, *Die Sprache der Amarnabriefe* (1909); E. Ebeling, BA VIII (1910). – The Nuzu dialect: M. Berkooz, *The Nuzi Dialect of Akkadian* (1937); C. H. Gordon, *Orientalia* N.S. VII (1938). – The Boghazkeul dialect: R. Labat, *L'Akkadien de Boghaz-kēi* (1932). – As to the study and collections of personal names the following scholars have contributed: J. Ménant (1861); H. Ranke (1902, 1905);

1. Pronouns. a. Separate personal pronouns. The first and second persons singular, masculine and feminine were presumably originally **'a*, **tā*, **tī* with a demonstrative prefix *'an-* on the analogy of the original demonstrative character of the third person. The Akkadian form *anāku* is difficult to account for (the form *anukī* is a W. Semitic loanword), but we have *-āku*, *-tā*, *-tī* as verbal endings in the permansive (stative); are these the primary forms, hence **'an* + **'a* + *āku*? Or is the permansive ending derived from the separate personal pronoun, hence **'an* + **'a* + *aku*? The first person plural is obscure as regards the formation. Perhaps Arabic *naḥnu* exhibits the earliest form parallel with Hebrew *naḥnū*, but later on, in the latter language as well as in Aramaic and Akkadian, the prefix *'a-* occurs, perhaps an analogical formation after the pattern of the first person singular; further the final vowel has become *-ī* in the two latter languages and in Ethiopian, in Akkadian not until a later period, perhaps on the analogy of the pronominal suffix. In the second person plural Akkadian has preserved the original vowels, but the masculine forms have been consonantly transformed on the model of the feminine forms, so that *-m* > *-n*. As regards the third person the primary Semitic consonants are only preserved in the S. Arabic Mehri dialect: masc. *he*, fem. *se*, plur. *hun*, *sen*; in Akkadian the initial sounds of the feminines have been transferred to the masculines (contrary to the other Semitic languages): *šū*, *šī*, plural *šunū*, *šinā*. — b. Personal suffixes. In the third person we find a parallel development to that described under the separate pronouns. In primary Semitic the first person probably had two forms (cp. Arabic), *-ja* and *-ī*; only the first of these has been preserved in Akkadian. For the fact that *-ja*, which is preserved after vowels or becomes *-a* > *-ā*, e.g. *mārūā*, is changed to *-ī* after consonants, e.g. *bēlja* > *bēlī*, is a quite different phenomenon and a result of special Akkadian sound laws; Hebrew and Aramaic, on the contrary, only preserved *-ī*.

II. The *ša*-relative is not a relative pronoun proper, so the relative relation must be expressed by suffixes in the subordinate clause: *Enlil ša ilāsu* (from *ilātšu*) *aptalaḥu*: "Enlil whom I fear", actually "Enlil-*ša*-his deity (divinity) — I fear." Here *ša* may be rendered by

K. Tallqvist, *Act. Soc. Scient. Fennicae* XXXII (1906); E. Huber (1907); A. T. Clay (1912); K. Tallqvist (1914); H. Holma (1914); E. Chiera (1916–17); F. J. Stephens (1923); E. Ebeling (1939); and I. J. Gelb, P. M. Purves, A. A. MacRae (1943).

"whose, whom, that", but it is only given a meaning by the suffix that refers to the subject. *ša* is also employed in genitive relations; *amāt aḫbū* "the word (that) I said", shows us the common Semitic status constructus form of *amātu* in an ideal genitive = the Akkadian relative clause. But we find the same meaning in *amātum ša aḫbū*, where *ša* begins a relative clause which is in the subjunctive, (e.g. *ālu(m) ša akšudu* "the town that I captured"), cp. above *aplalaḫū*. The genitive always follows its governing word¹ which is in the stat. constr., e.g. *šar šarrāni* "the king of kings", *šar* from *šarr* (a double consonant is dropped in the stat. constr.), auxiliary vowels may, however, be inserted to avoid an accumulation of consonants where the stat. constr. form is the normal form, e.g. *šamšu Bābili* "Babylon's sun" from *šamš Bābili*. Originally *ša* may be supposed to have been a demonstrative pronoun, "that, this", e.g. *šarru ša mātāti* "the king, this (king) of the countries (plur. gen.)"

III. Nouns. As regards the morphology, here as in Arabic and other Semitic languages we find a great abundance of noun forms where partly vocalic variation, partly the doubling of the second of the three radicals as well as the use of prefixes: *ʾ*, *m*, *l*, *š*, *n*, the infix *-l-* and the suffixes *-ātum*, *-ānum*, *-ām* and *-ājā*, are the decisive morphological elements. – Gender. The primary Semitic feminine ending *-at*, *-t* has been preserved in Akkadian and Ethiopian; in Arabic in Pausa > *-ah*, in Hebrew and Aramaic further > *-ā*. – Number. Akkadian *-ānu* (obl. cases *-ānī*), *-ē* (in the later period) as the plural mark is known from all Semitic languages; the starting point is probably an abstract ending whereas the plural ending *-ū* (obl. cases *-ī*) of the Hammurabi texts is only known in connection with the general feminine ending *-t-*, which forms abstracts, in Akkadian too. The facts are not clear. We lack all means of discovering the reason why the change from the old endings to the later *-ānū*, *-ē* has taken place. – Declension. In early Akkadian all the original three cases which are also preserved in Old Arabic are in use. The origin of the endings is obscure; in Akkadian they are furnished with mimation in the singular: nom. *-um*, acc. *-am*, gen. *-im*, which are dropped in the middle period when final *m* disappears (see p. 217). In the st. constr. the mimation always disappears in the earlier texts. In the plural the case endings

¹ The adjective may intervene, e. g. *ildni rabūti tik-li-ia*, "the great gods of my confidence" (Ashurb. Rassam Prism IV 101).

of the originally long endings *-û*, *-î* (cas. obl.) have become *-û* and *-î*. The mimation may go back to a generalising pronoun *ma* "something or other, something", whereas in Akkadian it is used for emphasis. From the Middle Akkadian period all syntactic differences are gradually obliterated and the endings are used indiscriminately; more especially the nominative is nearly always used for the accusative. In Neo-Babylonian they are used entirely *ad libitum*. The replacement of the old plural endings by new was discussed above under Number. —Status indeterminatus. Akkadian has no sign denoting definiteness, only in the st. constr. relation or when provided with suffixes are the nouns thus determined; *âlu* may denote both "the city" and "a city". On the other hand, the quite indefinite predicative noun may assume a special form termed status indeterminatus, the singular of which is identical with the pure stem and resembles the st. constr., the masculine plural ends in *-û*, fem. in *-â*, (both originally long vowels, shortened when final (see p. 216 IV. (6)). In connection with a short form of the separate personal pronouns for the first and second persons the predicative noun and the pronoun are fused into one word: *šarr-âku* "I am king"; the *-â-* of the first person is transferred by analogy to the second person masculine and feminine both in the singular and the plural. In Babylonian, but not in Assyrian, this *-â-* is assimilated to *-ê-* by assonance after a preceding *e*, e.g. *bêl-ê-tâ* "you are ruler" (2nd sing. masc.).

IV. Verbs.

1. Verbal stems. In Akkadian there occur, in all, 12 modifications of stems. We shall first deal with the stems, mentioned in the infinitive in what follows, which are known from other Semitic languages: (1) the basic stem *parâs-um*; (2) the intensive stem, the main function of which is factitive,¹ i.e. it is to express the production of the state denoted by the permansive (stative) of the basic stem, *purrus-um* (Assyrian *parrus-um*). (3) the causative stem: *šu-prus-um* (Ass. *ša-prus-um*); (4) the passive stem (originally with a reflexive sense) to the basic stem of the transitive, fientic² verbs: *na-p(a)rus-um*. On the other hand, verbal stems such as Pā'el, Pai'el, and Pau'el, known in Arabic and Ethiopian, are unknown in Akkadian. A characteristic

¹ Cf. A. Goetze, *JAOS* LXII (1942), pp. 1 ff.; W. von Soden, *Grundriss d. akk. Gr.* (1952), p. 115.

² As to this term see B. Landsberger, *Islamica* II (1926), pp. 352–72.

difference from Arabic, Ethiopian, Hebrew, and Aramaic is the Akkadian causative Šafel, formed with the prefix *ša-*, whereas the above-mentioned Semitic languages have *ha-* as a formative element, Hif'il.

To these four most frequently used stem-modifications must be added eight others, four of which have the infix *-ta-*, denoting change of direction, which we mentioned in p. 208 above; the basic function of the *-ta-* infix is "bei Umkehrung der ursprünglichen Richtung der Handlung auf das Subjekt hin zu passiver und reziproker, vereinzelt reflexiver Bedeutung, bei Bewegungen aber auch zu separativer Bedeutung der Formen."¹ The *ta-* modification of the four above-mentioned most frequently used stems (the basic stem, the intensive, the causative, and the passive stems) are: (5) *pitrus-um*; (6) *pitarrus-um*; (7) *šutaprus-um* (:šita-prus-um); (8) **nita-prus-um* > *ita-prus-um*. Above p. 209 we associated the active infix with influence from the Sumerian; in any case, in other Semitic languages modifications of the stem is only known with a prefixed *ta-* (vulg. Arabic *it-*, cp. Syr. *et-*), or as in Hebrew *hit-*. Previously these stems were termed reflexive-medial,² but after researches especially by B. Landsberger³ the results are now embodied in von Soden's above-cited formulation. It should, however, be mentioned that Fr. Delitzsch already realised that the medial-reflexive meaning was too narrow, and that the *ta-* stems were parallel with the basic stems, the intensive and causative stems: "Die Stämme . . . (i.e. the *ta-* stems) haben eigentlich reflexive Bed., doch lässt sich nicht immer . . . ein ausgesprochener Unterschied zwischen ihnen und den entsprechenden, gleichzeitig gebräuchlichen, einfachen Stämmen . . . erkennen."⁴

Peculiar to Akkadian are also stem-modifications with an infix *-tan-*, the so-called iterative stems, two of which are known which are connected with the meaning of the basic stem and the passive stem: (9) **pitannus-um* > *pitannus-um* and (10) **nitannus-um* > *itanannus-um*. These stems have not yet been subjected to any special investigation, but von Soden has pointed out a habitative sense besides the iterative;

¹ von Soden, *ibid.* p. 120; the last part of the formulation is especially based on A. Goetze's researches (*JAOS* LV1 (1936), p. 333).

² Thus, still, Ungnad, *Gram. d. Akk.* (1949), pp. 54, 58 ff.

³ *Isramica* II (1926), p. 361, cp. also A. L. Oppenheim, *WZKM* XLII (1935), pp. 1-30, and A. Goetze, *JAOS* LV1 (1936), pp. 297-334.

⁴ *Assyrische Grammatik* (1906), p. 238.

however, the infixation and the possible division into two infixes *-la + na-* surely suggests influence from the Sumerian verb.

Peculiar to Akkadian are finally also the intensive-causative stems (11) *šū-parrus-um*, also known with a *-la-* infix: (12) *šūla-parrus-um*.

2. Tenses. We can sort the Akkadian verbs into two groups: stative (transitive and intransitive verbs) and verbs denoting a condition, often of adjectival origin. Now the verbs of the Semitic languages have not properly any indicative tenses but a kind of aspects which distinguish between a momentary and an enduring character of the action. In terms derived from the Latin grammar the aspect which denotes the completed momentary action is called the perfect, the aspect of the momentary action not yet completed (partially lasting) is called the past (imperfect). Both these are inflected as finite verbal forms, so that the perfect can be termed an affirmative inflection and the past (imperfect) a preformative inflection. On the inflectional elements in Akkadian see below, Section 3. This tense system¹ which is generally prevalent in the Semitic languages, has undergone a change in Akkadian so as to make this Semitic language decisively different in essential particulars from the other related languages.

In Akkadian there are three aspects,² the two denoting the momentary, the third the enduring action. Besides differing in this from the other Semitic languages, Akkadian has developed in its own way as regards the momentary aspects too. While it is common to the Semitic languages that the perfect is formed by affirmatives of the various imperative stems, by regular vowel deviation, and the past (imperfect) in similar wise by preformatives, both the momentary Akkadian aspects are formed and inflected in exactly the same way, the preformatives of the primary Semitic past (imperfect) being used in both forms. Hence the two momentary aspects in Akkadian have other designations, viz. the preterite (the completed momentary action = the original perfect) and the present (the uncompleted momentary action = the original past or imperfect).

The preterite is the historical tense proper, e. g. *ikšud*, "he conquered", which can be strengthened by a prefixed particle *lū*, e. g. *lū allik*, which may also express a wish: *lublū* (on crasis see above

¹ Cf. Chr. Sarauw, *Das altsemitische Tempussystem* (Festschrift Wilhelm Thomsen 1912).

² G. Bergsträsser, *Einführung in die semitischen Sprachen* (1928), p. 23 uses another expression: kinds of action with objective differences of meaning.

p. 216 IV. (8)) "may I live". This wish may be negated by a prefixed *ai* (or *ā* before vowels, *ē* before consonants, e. g. *ē lašhulī* "may you not fear" (2. pers. fem.)). The vowel alternations of the preterite in the basic stem are *u*, *i*, *a*, e. g. *iprus*, *ipkid*, *išbat* (see also below). The preterite is rendered by our past (imperfect), perfect, and pluperfect, and denotes a punctual action.¹

The present which is rendered by our present and future, denotes an action not completed within a certain space of time (partially lasting); in verbs denoting a condition the present, unlike the permanent (stative), has an ingressive sense.² I think this observation of von Soden is more correct than that of Ungnad who maintains that the basic sense of the Akkadian verbs is always ingressive.³ In connection with Ungnad's general proposition that applies to all verbs, we may here recall B. Landsberger's division of the verbs according to their "Subjektsbestimmtheit", e. g. *ramāku* "to wash oneself", or their "Objektsbestimmtheit" e. g. *gullubu* (the intensive stem) "to shave".⁴ Such a division, however, is not possible in the Akkadian verbs. The present may also be used to express actions in the past, which we render by a clause denoting a state of things, beginning with "as", e. g. Sennach. Taylor Cyl. V 81 *išallū* (3. plur.). In the basic stem the present is always a trisyllabic word with a permanent *a* after the first radical; in the radical vowel after the second radical *a*, *i*, *u* alternate. With the preceding negation *lā* the present replaces a negative imperative, whereas the negation *ul* preceding the present denotes absolute prohibition. In the late period *lā* partly supersedes *ul*.

The relation between the second vowel of the present and the preterite compared will show that the Akkadian verbs may be divided into five main classes⁵ e. g.

	<i>a - a</i>	<i>i - i</i>	<i>u - u</i>	<i>a - u</i>	<i>i - u</i>
Pres.	<i>išab(b)at</i>	<i>ipaḳ(ḫ)id</i>	<i>ibal(l)u!</i>	<i>ikaš(š)ad</i>	<i>ilab(b)ir</i>
Pret.	<i>išbat</i>	<i>ipkid</i>	<i>iblu!</i>	<i>ikšud</i>	<i>ilbur</i>

Ignoring the last-cited main class, which very rarely occurs, von Soden⁶ has tried to characterise the remaining four radical vowel

¹ Bergsträsser, *ibid.* p. 23.

² von Soden, *Grundriss d. akk. Gram.* (1952), p. 102.

³ *Gram. d. Akk.* (1949), p. 52.

⁴ *Islamica* II (1926), p. 362.

⁵ Cf. Delitzsch, *Ass. Gr.* (1906), pp. 250-59 and Ungnad, *Gr. d. Akk.* (1949), p. 99.

⁶ *Grundriss d. akk. Gram.* (1952), p. 113.

classes within the fleutic verbs as well as the verbs denoting condition. As the first radical vowel class is given *a-u* comprising "eine Tätigkeit am Objekt schildernden Verben"; the second class, *a-a*, comprises a small number of much used verbs, e. g. *ṣabātu*, *lamādu*. The third class, *i-i*, comprises partly a small group of verbs of motion, partly and especially such verbs as express a momentary activity or action giving results; while the fourth class, *u-u*, contains verbs whose action or condition is not momentary, and intransitive verbs.—As regards verbs denoting condition, the radical vowel of these is as a rule *i*, according to von Soden;¹ in Old Babylonian and Old Assyrian, however, several of these verbs have *a* for a radical vowel, while other verbs of this kind have preserved such an *a* even in the late period, e. g. *iplah*.

Inspired by B. Landsberger's fundamental treatise *Die Eigenbegrifflichkeit der babylonischen Welt* (*Islamica* II, 1926), which we have often cited in our previous notes, Bergsträsser² also pointed out that the above-mentioned Akkadian stem-modifications with the infix *-ta-* were used not only as stem-modifications but as a kind of tenses. Thus the *-ta-* forms in temporal expressions within the differences "earlier"—"later" in relation to the actions determined by progress of time, always express "later", e. g. "to divide": *iprus* ("earlier")—*iptaras* ("later"); conditional clauses: in the antecedent clause *iprus* or *iptaras*, in the succeeding clause *ipar(r)as*; or antecedent clause: *iprus*, succeeding clause: *iptaras*. On the basis of these and other observations von Soden³ has erected a third prefixed aspect for the momentary action, called the perfect, which serves to express "die Nachzeitigkeit in der Vergangenheit". It will be a matter for future research to verify this relationship and possibly connect it with the *-ta-* stem-modifications. Here we shall merely point out that the Nuzu texts seem to show that the choice between the use of the ordinary preterite and the "*ta*-preterite" (von Soden's perfect) is largely scribal.⁴

While the two Akkadian preformative aspects may be called transformations on a given primary Semitic basis (the perfect, the imperfect) the third aspect, that of action, is an innovation in Akkadian. It is termed the permansive (stative) and expresses duration in contrast

¹ *Ibid.* p. 112.

² *Einführung in d. sem. Spr.* (1928), p. 23.

³ *Grundriss d. akk. Gram.* (1952), pp. 104 ff.

⁴ Cf. C. H. Gordon, *Orientalia* N.S. VII (1938), pp. 215–19.

with the momentary implied in the present and the preterite. The permansive is formed like the predieative nouns (see below under 3.) mentioned above under status indeterminatus (p. 221) and is, as will appear from the third person singular masculine, originally a perfect participle used predieatively, and like the Latin perfect participle has mostly a passive sense; thus the permansive, as an aspect, denotes that the action has been completed but that its consequences still persist, whereas the present and the preterite, in relation to the permansive, always denote purely ingressive actions, e. g. the present *ibal(l)uʃ* "he steps momentarily into life (i. e. health)" = he recovers his health; preterite *ibluʃ* "he stepped momentarily into health" = he recovered. On the other hand, we have permansive *mārī waldat* "she is one having borne children" = she has children. But from the timelessness of the duration aspect it appears that the sentence may also be rendered "she had children"; *bītam ʃabtū* may thus denote both our present, our past (imperfect), and our future: "they have (had, will get) the house". Of rare occurrence is the present participle (in the basic stem always, and in all Semitic languages: the form *kāšid*), a verbal noun like the infinitive and the perfect participle, e. g. *bānī* "he is a creator".

3. Inflection. The permansive cannot be said to be inflected, since like all other predieative nouns it occurs in status indeterminatus, i. e. a fusion of the noun and the short forms of the separate personal pronoun:

sing. 3 m	<i>ʃar</i> "king"	≠	<i>maruʃ</i> "sick"
— 3 f	<i>ʃarr-at</i>		<i>marʃ-at</i>
— 2 m	<i>ʃarr-ā-lā</i>		<i>marʃ-ā-lā</i>
— 2 f	<i>ʃarr-ā-lī</i>		<i>marʃ-ā-lī</i>
— 1	<i>ʃarr-ākū</i>		<i>marʃ-ākū</i>
pl. 3 m	<i>ʃarr-ū</i>		<i>marʃ-ū</i>
— 3 f	<i>ʃarr-ā</i>		<i>marʃ-ā</i>
— 2 m	<i>ʃarr-ā-tunū</i>		<i>marʃ-ā-tunū</i>
— 2 f	<i>ʃarr-ā-tinā</i>		<i>marʃ-ā-tinā</i>
— 1	<i>ʃarr-ā-nū</i>		<i>marʃ-ā-nū</i>

The inserted long vowel *-ā-* in the second person sg. and pl. is an analogical formation from the separate personal pronoun, first person *-ākn*. Between the second and third radical there is never any vowel.

The present and the preterite, on the other hand, are inflected verbally, uniformly, as mentioned above. Preformatives (and affirmatives) are as follows:

- sing. 3 m *i-* (< **ja-*)
 — 3 f *ta-*
 — 2 m *ta-*
 — 2 f *ta- . . . -ī*
 — 1 *a-*
 plur. 3 m *i- . . . -ā* (*i-* < **ja-*)
 — 3 f *i- . . . -ā* (*i-* < **ja-*)
 — 2 m *ta- . . . -ā*
 — 2 f *ta- . . . -ā*
 — 1 *ni-*

In the intensive (factive) and causative verbal stems every preformative *a* > *u*, which abolishes all difference between the first and third persons singular. The third person feminine singular is nearly always replaced by the third person masculine singular; the opposite seems to be the case in the plural where the affirmative *-ā* is used regularly for the second person plur. masc., but this is hardly because the feminine has ousted the masculine form, but because an old dualis, which in the masculine had the affix *-ā*, has superseded the original second masculine plural form.

Finally we shall mention another Akkadian verbal inflection, viz. of the ventive, to which we shall revert later on. The ventive represents a third mood as compared with the indicative (present, preterite, permansive) and the subjunctive, and is inflected as follows:

- sing. 3 m *i- . . . a(m)*
 — 3 f *ta- . . . a(m)*
 — 2 m *ta- . . . a(m)*
 — 2 f *ta- . . . i(m)*
 — 1 *a- . . . a(m)*
 plur. 3 m *i- . . . āni(m)*
 — 3 f *i- . . . āni(m)*
 — 2 m *ta- . . . ūni(m)*
 — 2 f *ta- . . . āni(m)*
 — 1 *ni- . . . a(m)*

On comparing with the present-preterite inflection we see here that all the forms without affixes in this inflection (sing. 3 m., 3 f., 2 m., 1 sing. and plur.) have the ending **-an*¹ > *-am* > *-a* in the middle period when the final *m* was dropped (p. 217), and that all plural affirmatives have been augmented by *-nim* > *-ni*; further that the second person singular feminine **-î* > *-î* has been replaced by *-im* > *-i*.

4. Moods. The Akkadian subjunctive is a relative mood unlike the indicative and the ventive; it gives expression to a subordinate statement and so it only appears in subordinate clauses. Subjunctives, as in Indo-European, are not known in Akkadian, they are replaced by prepositions or adverbial accusatives on which the whole subordinate clause depends. The subordinate clause is put in the subjunctive (on relative clauses see above p. 220). This is expressed by adding *-û* > *-û* to all indicative forms lacking affirmatives; in Assyrian, but not in Babylonian, a *-nî* > *-nî* is further added as a mark of subordinate clauses. In Neo-Babylonian and Late Babylonian, as also in Neo-Assyrian texts, the difference between the indicative and the subjunctive can no longer be seen, owing to the loss of short final vowels (see above p. 216 IV.(6)).—A special case is to be observed when the ventive (see below, 5.) is put in the subjunctive in a subordinate clause; here no difference can be seen between the indicative and the subjunctive, or in other words: the subjunctive form is not possible in subordinate clauses in the ventive.—Another special case is observable in the permansive, which as a verbal form can be put in the subjunctive, the ventive, is connected with the optative *lû*, and moreover can be combined with pronominal suffixes. But in Babylonian the affirmative *-at* in the third person singular feminine in the permansive is regarded as an affix, so that the subjunctive = the indicative *marṣat*. In Assyrian on the other hand, *marṣat* is regarded as lacking an affix, and the subjunctive is regularly: *marṣatûnî*.

There is no optative mood in Akkadian; this mood is expressed by the particle *lû* prefixed to the indicative verbal forms. Concerning the crasis thus emerging, the result of which as regards the shading of the vowel may be dependent on the stress, see above p. 216 IV.(8).

Finally it should be mentioned under moods that to every verbal form, also to the infinitive may be added an enclitic *-mâ* > *-mâ* whereby the verbal form is designated as the cause of or reason for

¹ Cf. A. Ungnad, *Gram. d. Akk.* (1949), p. 76.

the effects or consequences which are dependent on, derived from this, and which are expressed in the succeeding clauses. Parallels are found, e.g. in Hebrew, but the use of the particle *-mā* for this purpose is peculiar to Akkadian.

5. The ventive (for other terms for the ventive see p. 210). This, according to B. Landsberger¹, denotes in Akkadian a kind of mood which, unlike the subjunctive is declinable (see above p. 227). Ungnad² too with another terminology distinguishes in the indicative between ablatives (present, preterite, permansive) and allatives. Thus the declension alone cannot refer the ventive to the indicative aspects, and in my opinion the ventive is a kind of mood which only comprises verbs of movement and denotes the termination of the movement implied; $*-a(n) > -a(m)$ is then a terminative exponent of direction which as an affirmative gives all the aspects of the indicative (present, preterite, permansive, in which latter form only the third masc. sing. and the third plur. are possible), a greatly changed meaning; from the imperative, too, ventive forms may be made, just as the ventive is combined with pronominal suffixes. Concerning the change of meaning, compare e.g. *allik* "I went" with *allika(m)* "I went and thus terminated the movement implied" i.e. "I arrived (at this)". As to the origin of the affirmative Landsberger conjectured that *-am* is derived from the dative of the pronominal suffix of the 1. person sing., but he has not given any convincing grounds for this. Finally, concerning the ventive we may mention two facts: (1) that the verbal suffixes augmented by *-an-* are derived from original ventive forms of the verb,³ but that they also to a great extent are used in cases where no ventive occurs; (2) that the final vowel *-a* of the ventive often in the late period owing to assonantic assimilation becomes *-u* after a syllable containing *u*, and *-i* after a syllable containing *i*, e.g. *is-ḫu-pu*, *ik-nu-šu*, *it-ru-ku* (Sennach. Taylor Cyl. II 43, III 48).

G. Dialectal Differences.

The study of these has not as yet been systematised, but von Soden's large grammar from 1952 contains a wealth of material which may form the basis of future scholars' elaboration and collection of material.

¹ *Das Ventiv des Akkadischen* (ZA XXXV (1924), pp. 113-123).

² *Gram. d. Akk.* (1949), pp. 48-49, 99.

³ Not so W. von Soden, *Grundriss d. akk. Gram.* (1952), pp. 109-110.

The realisation of the Chicago Akkadian Dictionary Project may also be of the greatest value in this connection, but before this project materialises a real study of the dialects is not possible. Besides the difference between the official language of the two empires, there must also everywhere have been local dialectal differences in Babylonian as well as Assyrian; here I shall merely refer to the fact that in the Assyrian trading colony at Kül Tepe in Asia Minor certain sounds are articulated otherwise than in the mother country, probably under the influence of the languages spoken by the neighbours, e.g. $k, s, t > k$ or g, s, t , besides t becoming d and p becoming b . The facts are, however, further complicated by a study of the cuneiform script in the Kül Tepe texts: voiced and voiceless stops alternate, thus $ba : pa_2$; $be : bi_4 : pe_3 : pu_3$; $ti : te : ti_3 : di_3$; $dim : tim$; $gan_2 : kan_2$; $dar : tar_2$, so that above we mentioned $t > d$, $p > b$; but when we always in the script meet with zu , zi , and za as reproductions of the syllables zu , su , $ṣu$ etc. we cannot venture to speak of sound shifts; a characteristic feature also is the constant use of the sign si in words where, etymologically we should expect $ši$ or $še$. To this must be added the use of the sign $aš_2$ to the exclusion of $aš$, the parallel use of ab_2 and ab , la_2 and la simultaneously with innovations such as $ḫl$ in the senses di_2 , ti_2 , fi_2 ; $KA : šal_2$; $ŠI : lum_3$; $KIB : tur_4$ etc. while current signs such as mi , $ši$, $še$, and te are not employed.

It is possible that the Hurrians and not Babylonian or Assyrian sources were the intermediate link as regards the use of those lists of signs which are the basis of the Akkadian dialects we know from Boghazkeui, the Amarna letters, and the Nuzu texts (see above p. 218¹); a number of interesting divergences would seem to indicate this, e.g. the unique use of KA as ka_4 alternating with ka . But before a special investigation has been made of the historical use of the cuneiform script in relation to the dialectal sound deviations—and such an investigation is a prerequisite of the regional investigations recommended above—all statements should be made with caution. Such caution, indeed, characterises the brief remarks to follow on Babylonian and Assyrian, which could hardly be more meagre.

The two following sound shifts seem to be peculiar to Babylonian: $k > g$ and $m > u, w$. As regards the first of these we should, however, remember that in the early Akkadian period we encounter great uncertainty in the use of the cuneiform signs which had been invented

by the Sumerians, so that *š* is represented by *z*, *ṣ* by *t* or *d*, besides no distinction being made between *š*, *s*, and *z* initially, any more than between *ḥ* and *ʿ*.

Peculiar to late Assyrian seem the sound shifts *š* > *s* (especially before *b* and *p*) and *šl* > *ss* > *s*, e.g. *usbat* < *wašbat*; *asakan*: Bab. *altakan* < *ašlakan*. Further vowel assimilation occurs to a much greater extent than in Babylonian as a result of retroaction of a final *u* or *i*, whereas vowel assimilation *a* > *e* under the influence of an adjacent *-e* does not occur in Assyrian, though it does in Babylonian, e.g. *epāšu*: Bab. *epēšu*.

As regards the grammatical differences we shall here only refer to the two ways mentioned on p. 228 in which the permansive subjunctive of the third person is regarded and formed in the two main dialects and to the affix *-nī* added to the finite verbal forms in Assyrian only as a sign of dependent clauses. For countless grammatical details in which Babylonian and Assyrian differ the reader is referred to von Soden's standard work.

§ 2. Sumerian.

(Cp. Chapters III §§ 10-11 and IV §§ 3 and 5).

Sir Henry Rawlinson's conjecture in 1855¹ as to the affinity of the Sumerian language to Turkish, Mongol, and Manchu, proved to be right as researchers gradually penetrated further into the language, in the sense that it is an agglutinative language like e. g. Ural-Altaic and Dravidian. Since Rawlinson's time there has been no lack of scholarly researches in which it has been attempted partly on the basis of our earlier, and partly on our gradually extending, insight into the structure of the Sumerian language to connect the language with known spoken languages. African Negro languages have been proposed, such as Bornu, Nubian, Sudanese languages and Bantu idioms (Drexel, Hommel, Th. Kluge), Ural-Altaic (Lenormant, Hommel), Dravidian, Tibeto-Burmese idioms, Chinese (C. J. Ball), Australasian idioms as e. g. Polynesian, Melanesian, Mon-Khmer (E. Stucken, Th. Kluge); Basque, Etrurian, Caucasian idioms, e. g. Georgian and the remaining southwestern group (F. Bork), besides Indo-European (St. Langdon, C. Autran), and Hamito-Semitic (C. J. Ball).² All these references except the last two point to agglutinative languages, but it must be maintained that it has not yet been possible to connect Sumerian linguistically either with groups of spoken languages or with such as we only know through texts which bear a message to us of languages no longer spoken.

The Sumerians were the inventors of the cuneiform script in the sense that the script gradually developed from pictographic signs, which were most likely originally used on seals. In the archaic texts from Uruk we seem to meet with the absolute beginning of a writing with many pictographic signs; several of these are also found on

¹ *Athenæum* 1855, p. 1438.

² Cf. V. Christlan, *Die sprachliche Stellung des Sumerischen* (*Babyloniaca* XII (1931), pp. 97-222); concerning suggestions put forward after 1931, see E. Sollberger, *Le système verbal* ... (1952), pp. 10-11.

contemporaneous seals. The contents seem to centre round the temple economy; only later do private business affairs appear in writing. The language of the Jemdet Nasr tablets may with certainty be established as Sumerian. How long this language was spoken we cannot tell; at any rate it is certain that it ceased to be the main language of the country from the time of the 1. Babylonian Dynasty, just as its use in official documents ceases from that period. But we have evidence that Sumerian was still regarded as the language of the religious ritual and was used as such right down into the late period. The Semitic conquerors of Babylonia attached weight to a knowledge of Sumerian; it is characteristic that the earliest bilingual Akkadian-Sumerian texts date from the very period about the 1. Babylonian Dynasty. Hardly any but the highest dignitaries of the priesthood understood Sumerian we may suppose, while the priests of the lower ranks probably knew the texts more or less by heart without any real understanding of them. In the schools for scribes the foundation was laid for the study of Sumerian, and here there must have been sure knowledge. Very few Sumerian texts must be subjected to conjectural criticism because incorrect forms have crept into the texts by faulty copying or mishearing during dictation. As to the relation of the heads of the slate to the Sumerian language in Babylonia or Assyria we know nothing, but it should be mentioned that Ashurbanipal, who was greatly interested in literature and created the unique library in which previous and contemporary literary productions of every kind were collected in copies, states that he knew Sumerian: *aš-ta-si kam-mu nak-lu ša šumeri šu-ul-lu-lu ak-ka-du-u ana šu-te-šu-ri aš-šu*, "I read the curious text of the obscure Sumerian (which is) difficult to translate into Akkadian" (Ashurbanipal's inscription L⁴ (K. 3050 + K. 2694), Obv. I 17.¹

The following may serve as a general characterisation of Sumerian. The stems of the words are unchangeable, whereas the prefixed, infixed, and suffixed elements may undergo sound changes (loss of consonants and vowels, assimilation of consonants or vowels). The root does not undergo any change by fusion with the grammatical elements as in the Indo-European languages, for such a fusion does

¹ Published by C. F. Lehmann, *Samasumukin* ... (1892; AB VIII), Pl. XXXIV f. Concerning other translations see St. Langdon, *A Sumerian Grammar* (1911), p. 3, and M. Streck, *VAB VII 2* (1916), p. 257.

not take place, whereas the roots and particles are joined on a concatenation principle. The difference between our units, nouns and verbs, does not exist; *dug*₁ as a word stem means "speech, words" as well as "to speak". Standing alone or with a pronominal suffix we designate it as a noun; in a chain of words into which may enter both a direct and an indirect object, or a direct and an adverbial relation, we regard *dug*₁ as a verbal root. But such a division into nouns and verbs is viewed from without, by *dug*₁ the Sumerians express everything connected with the sounds issuing from man in the shape of articulate speech; *dug*₁-*ma*₂ (*mu*) where *ma*₂(*mu*) is the pronominal suffix for the 1. person, we translate as "my speech, my words", but this is narrowing it down, for the following translations are just as correct: "to speak + mine; speaking + mine; having spoken + mine", to mention only a few of the many possibilities. The Sumerian word stems, the roots of the language, must be regarded as centres for all the possibilities of meaning which are denoted by the root. Using our terminology, it is latently substantival or verbal and within the last group the root comprises in itself all the tenses of the indicative and the various moods. Through what we denote as grammatical elements the meaning of the root aimed at in the context is accentuated. But it should be kept in mind that what we call grammatical elements are in themselves roots of far-reaching meaning which, it is true, have become somewhat worn down through constant use and so may give us the impression of being mere particles.

1. The word stems are either simple or compound. More than half (945) of the simple ones, which number about 1800, are monosyllabic roots of the types *a*, *ab*, *ba*, *bar*; the 646 dissyllabic roots have more formative groups than the monosyllables; the following 12 types may be mentioned: *ama*, *bala*, *abba*, *dalla*, *anšu*, *banda*, *azag*, *kalam*, *akkil*, *gukkal*, *engar*, and *dingir*. Trisyllabic roots, e. g. *urudu*, *kalama*, to mention only two types, are far less numerous (c. 200); quadrisyllabic ones are rare.¹ Sumerian must have been very much worn down; through the loss of final consonants numerous words of entirely different meanings have come to sound alike (e. g. the numerous *du* roots: Deimel² counts 23, Labat³ 19 different meanings). The reader

¹ Cf. A. Deimel, *Sumerische Grammatik* (1939), p. 18.

² *Sumerisches Lexikon* III 1 (1934), pp. 73-76.

³ *Manuel d'épigraphie akkadienne* (1952), p. 252.

of the texts can overcome the difficulties in so far as the many different *du* roots are designated by quite different signs. And in the spoken language we must suppose that musical accents as well as the resulting different shading of the vowels, have facilitated the hearer's understanding of which *du* was meant, and of course the context in which one of the other *du* occurred would further help him to decide which it was. That loss of final vowels also occurred, e. g. in the dissyllable type *bala*, is seen from the many homonymous stems of the form: consonant + vowel + consonant; compare e. g. the large number of word stems of the meaning *gar* (16), *gir* (12), *gur* (18); *sig* (13), *sur* (11), *tum* (10).

The compound word stems fall into several classes. (1) Reduplication of the simple root: *lal* < *la* + *l(a)*, *gig* < *gi* + *g(i)*. (2) Junction of two different roots: *še-ba* "corn to be distributed, i. e. wages"; *sag-gig* "head to be ill"; *igi-gig* "eye disease"; *lu₂-gal* "man + great, i. e. king", *e₂-gal* "house + great i. e. palace, temple". Particularly nouns like *igi* "eye", *ka* "mouth", *sag* "head", *gu₂* "neck", *ša₄* or *ša₃* "heart", *šu* "hand", and *ki* "place" form new words in connection with stems of verbal meaning. (3) Prefixed compound word stems are used for expressing abstracts. The prefixes are *nam-* and *nig₂-*, more rarely *nim-* and *giš-*, the latter being a kind of determinative before wooden objects of every kind. E. g. *nam-lugal* "royal dignity", *nam-sig* "weakness" (*sig* "to be low, weak"); *nig₂-ba* "gift".

11. As regards the Sumerian speech sounds, the stock of vowels consists of *a*, *i*, *e*, *u*, and the vowel of the word stems is fixed; there are no diphthongs. *a* may have been pronounced *ā*, and it is possible that the *e*-containing Sumerian signs, thus, besides denoting the pure *e*, were also used for the *ā*-sound. This possibility, however, as well as the relation between *e* (*ā*) and *i* needs further examination. Of the long vowels in Sumerian we know nothing with certainty (see below p. 238).

The consonants are *b, p*; *g, ġ*, *k, k̄*; *d, t, l*; *z, s, š, š̄*; *l, m, n, r*; *h*; the use of the consonantal emphatic units is perhaps due to the influence of Akkadian¹ just as the fact that the sign for Alif and syllables beginning with *w-* only come into use with the 1. Babylonian Dynasty.²

¹ C. J. Gadd, *A Sumerian Reading-book* (1924), pp. 14-15, on the other hand, says: "these sounds are constantly used in Sumerian writing, and it is difficult to account for their presence if they did not correspond with a real necessity of the language."

² Delmel, *Šum. Gr.* (1939), p. 15.

The existence of the nasal guttural \tilde{g} was surmised by Arno Poebel,¹ e. g. *hun* "to hire", which with a vocalic affix shows an *-ng-*: *lu₂-hun-ga₂* "day-labourer". This has later been confirmed by B. Landsberger's² investigations. In 1950 E. Sollberger³ conjectured a \tilde{g} "correspondant sonore de *h*", expressed graphically by *h.g.* and even by *k*; in 1952⁴ he claimed that the sound \tilde{s} could be eliminated from the Sumerian of the Lagash texts. Future research must judge of this proposal. The consonants are not kept sharply apart, but perhaps this is merely due to the writing; thus we find both *udug* and *utug*; *kilem* and *gilem*; *bal:pal*; *suḥuṣ:suḥus*; *iṣib:izib*. That this vacillation, in the main between voiced and voiceless stops, should express sound laws we can hardly believe, nor, if so, would we be able to indicate the cause (cp. the part played by the accent in Indo-European) of such sound transitions.

III. As regards the Sumerian sound laws, we may become acquainted, particularly in Poebel's detailed grammar of 1923⁵, with a number of empirically established sound transitions, but we should remember that our knowledge is very limited and that we often encounter linguistic phenomena that we are unable to explain. Sound laws in the Indo-European sense we cannot speak of, we can only ascertain the changes of the word stems without being able to point out the causes of these. Already François de Leuormant, the founder of Sumeriology, called attention to the principle of vowel harmony and in this was followed by St. Langdon⁶; whereas Poebel,⁷ in his phonetics, confines himself to describing various forms of progressive or regressive vowel assimilation. This is the empirical stage, and 9 years earlier, in 1914, Fr. Delitzsch⁸ had discountenanced "vowel harmony" as an integrating law in Sumerian. But these as well as other Sumerian sound laws have no solid foundation as long as no exposition of the history of the language is available. To this language too, as to Akkadian, it applies that a language cannot be studied or described at all except

¹ *Grundzüge der sumerischen Grammatik* (1923), p. 17.

² *Die Serie Ur-e-a = ndqu*, pp. 26 ff. (*MSL* 11 1951).

³ *Études de linguistique sumérienne*, pp. 60-62, 88 (*Cahiers Ferdinand de Saussure* 9 (1950)).

⁴ *Le système verbal* ... (1952), p. 16.

⁵ *Grundzüge d. sum. Gr.* (1923), pp. 12-28.

⁶ *A Sumerian Grammar* (1911), pp. 45 f.

⁷ *Grundzüge d. sum. Gr.* (1923), pp. 13-14.

⁸ *Kleine sumerische Sprachlehre* (1914), p. 6.

by periods. The materials available for study are partly the original pre-Sargonic texts, particularly from Lagash, partly Akkadian glosses or phonetic spellings of Sumerian words, in part from post-Sumerian times, and bilingual texts. Here it is of value to remember Poebel's warning words with reference to a Sumerian Samsu-iluna inscription.¹ He points out that "das alte grammatische System des Sumerischen bekanntlich unter dem Einfluss des Akkadischen bereits mancherlei Veränderungen erfahren hatte. Ja, nach vielerlei Anzeichen differierten sogar die einzelnen nachsumerischen Schreiherschulen in der Auffassung des Sumerischen und in ihren grammatischen Theorien wieder ganz beträchtlich untereinander."² It is not known with certainty, Poebel³ continues, "ob der Verfasser dem alten grammatischen System des Sumerischen oder einem Schulsystem seiner eigenen Zeit folgt, ob er die von ihm gebrauchten Redewendungen in derselben Weise versteht und konstruiert, wie es die alten Sumerier taten, oder ob er sie bereits nach dem Akkadischen umgemodelt hat."

Great weight attaches to these words, which cannot be disregarded, the more so because they strike without consideration at Poebel's own grammatical studies before this pronouncement appeared in print in 1934. We may add to this that the Neo-Sumerian texts, first composed under the Ur III Dynasty (2123–2016) and still composed during the Persian reign of the Arsacids, are characterised by features which are not Old Sumerian. Thus e. g. the parts of the sentence in the Sumerian syntax are strongly influenced by Akkadian models; a promiscuous use is made of the main dialect and eme-SAL forms; the nominal dative affix *-ra* (in Old Sumerian only denoting persons) is also employed as "Dativ der Sache" (referring to animals and things) instead of *-a* in Old Sumerian; and from the close of the second millennium the Sumerian remains chiefly comprise eme-SAL texts. And the result must be that our only safe foundation is either the pre-Sargonic or the Gudea texts, which in addition represent a particular period locally and temporally defined. Anton Deimel was the first to understand this and demonstrated it in the first edition of his Sumerian grammar from 1924. Poebel⁴ followed him in 1931 with his treatise

¹ AOF IX (1933–34), pp. 250 ff.

² *Ibid.*, p. 250.

³ *Ibid.*, p. 251.

⁴ *The Sumerian Prefix Forms e- and i- in the Time of the Earlier Princes of Lagash* (1931; AS No. 2).

on two of the verbal prefixes from pre-Sargonic texts. His above-quoted decisive pronouncement of 1934 has been of fundamental importance for modern Sumeriology as represented by A. Falkenstein¹ and E. Sollberger.² Hence it will be understood that in the description to follow of the phonetics and morphology (and accidence) of the language we maintain a certain reserve and in the main take account of pre-Sargonic texts.

IV. Phonetics.

1. The most important of all Sumerian sound changes which have been observed may perhaps be formulated as follows: a closed syllable may lose its final consonant, an open syllable its final vowel, e. g. $du_4 = du_{11}$, $nita_4 = nita = nit$. This extremely important "sound law", which, however, has numerous exceptions, has contributed to reduce half the vocabulary of Sumerian to monosyllabic roots. We have no explanation of this, we cannot refer to a strong dynamic accent, since such an accent can hardly have existed seeing that word stems such as *kalama* and *urudu* have been preserved; we can merely note that the final consonant *-b* is rarely lost.

2. As far as the vowel changes are concerned we can demonstrate assimilation, but it is impossible to offer unambiguous explanations; by progressive assimilation *a* and *i* transform respectively *u* and *e*, whereas the opposite is the case with regressive assimilation. Vowel contraction is known: *i* transforms *e*, *a* transforms *e* and *u*, and $u + e > u$. We do not know whether the result of the contraction is a long vowel. Thus the name of Sin-idinnam of Larsa and Ur³ is written ^dZuen-i-di-na-ain, which we cannot venture to transcribe Sin-idinnâm (cp. below p. 241). Further we note that some word stems, particularly those of the numerals, with identical meaning occur with three (or two) different vowels, e. g. $du_4 = di_9 = de$ = Akkadian *šabû*, but we cannot explain why, nor can we account for the loss of an initial vowel, e. g. $ara_4 = ra_2$ = Akkadian *alâku*. The circumstance that we cannot, as in all other civilised languages, demonstrate long vowels, the relation between short and long vowels, between a short vowel + a consonant

¹ *Grammatik der Sprache Gudeas von Lagas* I-II (1949-50; *Analecta Orientalia* 28-29).

² *Le système verbal dans les inscriptions "royales" présargoniques de Lagas* (1952), cp. also his publication of 1950 mentioned above in note 3 p. 236.

³ Cf. S. Pallis, *Chronology of the Shub-ad-Culture* (1941), p. 341.

or a consonant + a short vowel, where perhaps in both places "short vowel" ought to be replaced by "short (or long) vowel", hampers a description of Sumerian phonetics. Finally we may mention two facts that have been noted with regard to the vowels of the language: loss of a vowel when two word stems are joined, e. g. *ki* + *zalaq*, "the glorious place" > *kislaḥ* = Akkadian *maškanu* "store, storeroom, warehouse" (-*g*: -*ḥ*, see below under 3.), as well as the addition of a final vowel in assonant agreement with the vowel of the word stem, for the strengthening of the final consonant (see above under 1.), e. g. *bal:bala*. Of quite a different kind is the phonetic complement occurring in the writing e. g. *bal-la*, *kur-ra*; whether the final consonant is also geminated in the pronunciation we do not know.¹

3. The consonant changes must often merely be noted as an alternation (cp. the vowels above in 2.), without further explanation being possible; as the principal changes I may note the following: (a) *d:s* (also applies to other dentals and sibilants), e. g. *nidaba:nisaba*, (b) *d:g*, e. g. *diš₂:giš₂* = Akkadian *istēn*; *gidin:gigim* = Akkadian *ejimmu*; (c) *k/g:š*, e. g. *gir₁₁:šer₂* = Akkadian *šanādu*; (d) *b:g*, e. g. *šab₂:šag₄* = Akkadian *libbu*; (e) *g:h*, e. g. *gum:hūm* = Akkadian *ḥamāzu*; (f) *š:l*, e. g. *diš₂:dili* = Akkadian *istēn*. Perhaps certain alternating forms express dialectal differences.

A comparison of *nimin:nin₃* = Akkadian *arbā* "40" and *unuš:uš₄* = Akkadian *jēmu*, seems to show loss of intervocalic *m* > *w*, or else *w* has become *u* and contracted with the two vowels which also determine the shading of the contraction product; if this hypothesis is correct, the vowels of *nin₃* and *uš₄* must be long. There is a temptation to include *temen:ten:te* in the discussion, but here we have only identity of script not of meaning. A loss of consonant is perhaps also seen in the contraction product of *bar + bar* > *babar:babbar*. If *babar* is not = **bābar* we have here loss of the final consonant of the first word stem but the alternate form *babbar* suggests progressive assimilation of *r* > *b*. The loss of initial *ḥ* seems to take place according to the observed alternation between *ḥu₃:ḥa₃:u:a₆* = Akkadian *ešru*.

Progressive assimilation of consonants is seen in alternating forms such as *unkin:ukkin*, from *tukun + bi* > *tukumbi*, and from *mud + mud* > **nudnu* > *mummu²*; consonantal dissimilation of *d* > *l* owing

¹ Otherwise Delmel, *Sum. Gr.* (1939), p. 23.

² Cf. Delmel, *Sum. Lex.* III 1 (1934), p. 165.

to another dental may probably be seen in *nīlalam* = Akkadian *hā'iru*, *hīrtu*, which according to the writing seems to be derived from **nīladam*. Finally we may mention that consonant gemination perhaps takes place with verbal prefixes and infixes.

V. Dialects. We know with certainty three Sumerian dialects and to this may be added the information gleaned from VATh 244, the so-called Berlin Vocabulary¹ about 5 other Sumerian *eme* = Akkadian *lišānu*, tongues, languages. The three certain dialects are *eme-KU* = Akkadian *lišān Šumeri*, *eme-SAL* = Akkadian *lišān Akkadi*, and the one that we only know from the Ammi-zaduga inscription² which shows essential deviations from the two aforementioned *eme*. We do not know the meaning of KU and SAL, but on the basis of the use of the latter sign to denote "woman" and everything that has to do with the female sex Deimel³ claims that these two *eme* denote recitation methods in the religious ritual, partly with women's partly with men's voices; hence Deimel maintains that the meaning of KU must have been = Akkadian *rubû*, "strong, mighty". Delitzsch⁴ calls attention to the Akkadian loanword *ummisallu*, "elegy", while Gadd⁵ points out that *lu₂ eme-SAL* = Akkadian *dib-ru-u*, "a man of broad speech" i. e. a countryman. A. Falkenstein⁶ calls the *eme-SAL* dialect "der von Haus aus für die Rede von Frauen reservierten Sprachform."

We must dissociate ourselves from all these attempts, merely noting that *eme-KU*, which is the main dialect in which most of the texts and the most heterogeneous texts are written, was the southern dialect, while *eme-SAL* is the northern dialect; the latter is confined exclusively to religious texts.⁷ They all seem to have been recited by a certain class of priest called *gala* = Akkadian *kalû*. The *eme-SAL* dialect cannot be said to be later than *eme-KU*, since *eme-SAL* forms have been found in the earliest inscriptions, e. g. the Fara texts. Of the relation between the two main dialects we can only speak with caution.

¹ G. A. Relsner, ZA IX (1894), pp. 159-64.

² See H. V. Hilprecht, *Old Babylonian Inscriptions*, No. 129 (*Bab. Exp. Series A 1*, 1893-96); the original is a MIO text in Istanbul (see p. XVI).

³ *Sum. Gr.* (1939), p. 50.

⁴ *Kleine Sum. Sprachl.* (1914), p. 12.

⁵ *A Sum. Reading-book* (1924), p. 42.

⁶ *MDOG* 85 (1953), p. 3.

⁷ The chief *eme-SAL* texts then known were registered in Delitzsch, *Sum. Gloss.* (1914) pp. XII-XXIII.

but the Nippur Vocabulary¹ which was found in the region of the southern dialect, as well as other texts of the Nippur school, occasionally show eme-SAL forms; here we are perhaps confronted by local dialectal deviations, as e. g. in the Boghazkeui dialect 1. personal pronoun *ga-e*, as compared with eme-KU: *ma₂-e*; eme-SAL: *me-e*, *me*.

As regards the Berlin Vocabulary, which we mentioned above, it is difficult to correlate its five terms for *eme* with the two aforementioned main dialects, but we may perhaps be guided by a few of the words in the Vocabulary. A form such as *mu-lu* for Akkadian *amēlu*, which in eme-KU is *lu₂* is noted as an *eme-temen(le)-na₂* form, so that this *eme* seems to be equivalent to eme-SAL; but it should be kept in mind that another of the *eme* of the Vocabulary: *eme-gal* is called eme-SAL in Col. IV 18. Perhaps the *eme-si-di* (or *sa₂*) of the Vocabulary is equivalent to eme-KU, but of the other *eme* in the Vocabulary (*eme-sukud*; *eme-suh-a* and perhaps either *eme-gal* or *eme-temen-na₂*, see above) we know nothing; and perhaps Delitzsch² is not far wrong in saying "so führen diese . . . Bezeichnungsweisen unzweifelhaft nicht auf Dialekte, sondern auf Sprechweisen (prosaische oder poetische, gewählte oder vulgäre z. B.)". It is for the future to decide about these problems. But the relation between *utu*, *ud*, *u₄* "day, sun" on the one hand, and *ug₄* "day, sun" on the other hand, would seem to give us a hint of the existence of more dialects than the above-mentioned two (eme-KU, eme-SAL), since these in the present case both have *utu*, and since we know the consonantal alternation eme-KU *g*: eme-SAL *d* (see below p. 242).

As regards the relation between eme-KU and eme-SAL, the only dialects about which we know anything with certainty, the following differences may be noted: (1) Unlike the highly ideographic appearance of eme-KU in the script, eme-SAL is always written phonetically; thus e. g. the cuneiform sign KA is read ideographically as *inim* = Akkadian *anātu*, but is written *e-ne-em* in eme-SAL. We see from this that *-ne-em* is not to be read and transcribed *-nēm*; compare above our remarks on long vowels in Sumerian. The cuneiform sign UN is read ideographically as *kalama* in eme-KU = Akkadian *mātu*, in eme-SAL: *ka-na-ag₂-ga₂*.—(2) Marked consonantal alternation has been observed between the two main dialects, especially the voiced

¹ A. Poebel, *Historical and Grammatical Texts* No. 102 (Univ. of Pennsylvania, Public. of the Bab. Sect. V 1914).

² *Kl. Sum. Sprachl.* (1914), p. 12.

palatal guttural in eme-KU: *g* alternates with *m*, *d*, and *b* in eme-SAL, while we may note that the opposite too is the case as regards the relation between *g* and *m*; (confer also above about the 1. personal pronoun of the Boghazkeui dialect), e. g.

a. <i>gal</i> ₂	: e-S <i>ma-al</i>
<i>dagal</i>	: e-S <i>da-na-al</i>
<i>dingir</i>	: e-S <i>dint-me-ir</i>
<i>kalania</i>	: e-S <i>ka-na-ag₂-ga₂</i>
b. <i>igi</i>	: e-S <i>i-de₃</i> or <i>i-ne</i>
<i>gin</i>	: e-S <i>dim₂</i>
<i>a-gar₃</i>	: e-S <i>a-da-ar</i> = Akkadian <i>ugāru</i>
c. <i>dug₂</i>	: e-S <i>ze-ib</i> , <i>ze-ba</i> < * <i>zim</i> .

Further we may mention *l:n* (*kalama:ka-na-ag₂-ga₂* see above); *n:š* (*nir-gal*: e-S *še-ir-na-al*); *d:z* (*dug₂:ze-ib*, see above), and *h:d* (see below in 3°).—(3) Of grammatical differences it need only be mentioned that the modal verbal prefix in the optative or precative sense *he₂-* in the eme-SAL is *de₃-* and that the voluntative prefix *ga-* sounds *da-* and that the indefinite pronoun *lu₂* has the form *mu-lu*; otherwise the grammar is identical with that of eme-KU.

VI. Morphology and Accidence.

A. Nouns. (a) Gender is not expressed. (b) Number. The plural is designated by the suffix *-me* (< *-meš*?), in the case of persons, by *-ĥl-a* > *-ha₂* referring to animals and things, e. g. *šū-ĥa-me* "hand + fish + many, i. e. fishermen"; *udu-ĥa₂* "sheep". Later the pronominal suffix *-ene* was used (after vowels *-ne*) e. g. *en-gar-e-ne* "the peasants", *din-gir-ri-ne* "the gods" (*-ri-* is the phonetic complement, see above p. 239). The plural may also be expressed by the doubling of the word stem, e. g. *kur-kur* or dittographically *kur-kur-e-ne* "the mountains". (c) Declension. A number of postpositions are used to express what we call cases, e. g. *-e* for the nominative and (rarely) for the accusative, *-ag/k* for the genitive, *-ra* for the dative, *-a* for the locative, while the postpositions *-la* "from, out", *-da* "with", *-šū₃* "in, to" denote ablative, causative, and instrumental aspects. These postpositions may from assimilatory causes resembling vowel harmony change their vowel, e. g. *-šū₃: -eš: -aš: -uš* (?); *-ra: -ar: -ir: -er: -ur₂*. Other nominal post-

positions are $-dim_2$ (var. $-kin$, $-gim$, $-ge_{16}$) "just as"; $-am_3$ which is used after numbers, especially the cardinals and with predicative nouns in principal and subordinate clauses; $-kam <$ genitive $-k + am_3$; $-dam$ from the postposition $-da$ "with" + am_3 . It should be noted that the $-ra$ dative is only used about persons, e. g. *Nin-gir₂-zu-ra*; the dative of things is expressed by the locative $-a$, e. g. *gig₂-a* "in the night". In Neo-Sumerian $-ra$ is also used, incorrectly, about things, e. g. *gu₂-en-ne-er*. It is important here to observe two rules which apply to all the above-mentioned Sumerian nominal postpositions: (1) All the adverbial aspects expressed by postpositions to the nouns in the nominal clause may be resumed in the verb by infixes, some of which are identical with the nominal postpositions even though this does not always occur, particularly in the earliest texts. Examples will be given under the verbs. (2) If the noun is dependent not only on the postposition but also on apposition, adjective, genitive, plural etc. the postposition is placed at the end of the whole chain of words and is not added as a suffix to the noun governed by the postposition, e. g. the postposition $-ra:nin-ni-ir$ "to his lady paramount" (noun + pronoun + dative postposition); *sib₂-zi-udu-ka-ni-ne-ir* "to his ($-ani$) faithful ($zi < zid$) shepherds ($sib_2 + -e-ne$ plur. $> -ne$ after a vowel) of sheep ($udu-ak > udu-k$)"; the final $-ir$ is the postposition $-ra$, vocally assimilated to the two preceding vowels.

The genitive is likewise expressed by the postposition $-ag/k$; the consonantal difference seems to be due to the shading of the vowel, so that we have k preceding a , g preceding e , but it should be kept in mind that the genitive suffixes are never $-ka$ or $-ge_2$, these two forms being the result of fusion, see e. g. above in the last Sumerian sentence $-ka-$, of which more below. The postpositions or the suffixes of the genitive are exclusively $-ak$ or $-ag$; the final consonant is preserved before a vowel, e. g. the above-mentioned vocalic nominal postpositions $-e$, $-a$, plur. $-e-ne$, the pronominal suffix $-a-ni$ "his", another genitive $-ak > -a$, etc. Thus in the sentence about the shepherds: *udu-ka-ni* is from *udu + ak-a-ni* "the sheep's, his [faithful shepherds]". Preceding a consonant (e. g. another suffix) or absolutely final (see p. 238 IV. 1.) the consonant of the genitive suffix is dropped and $-ag/k$ becomes $-a$, e. g. *dumu* ^d*En-lil₂-la₂* from ^d*En-lil₂-lak/g*; *ma₂ lugal-la-na-ju₃* "to his king's ship (ma_2)". Here we see that *lugal-la-na...* is derived from ^{*}*lugal-la-ni-ak/g*... In both sentences we note a pho-

netic complement (see p. 239) to *-lil₂-* and to *lugal-* in the form of the gemination of the final consonant, as also e. g. in *e₂-lugal-la* < *e₂-lugal-l + ak/g* "the king's house". The external mark of a double genitive is most frequently a final *-ka*, *-ak + ak* becoming *-k + a*; the vowel of the first postpositional genitive being fused with a word's final vowel, while the final consonant of the second genitive is dropped finally (see above p. 238 IV. 1. and e. g. *dug₃ > du₁₀*), e. g. *sa₂-dug₄ itu(d)-da Lugal-an-da-nu-š₃-ga₂ pa-te-si ŠIR. BUR^{ki} + la-ka*; here the double genitive, the graphical result of which is *-ka*, has originated as follows: the first genitive is dependent on *sa₂-dug₄*, the second on Patesi; the single genitive is *itu(d)-da* < **itu(d)-d + ak*, the phonetic complement + genitive suffix. The whole sentence can be rendered "Lugal-anda-nushûga's, Patesi of Lagash, the fixed due of the month", or "the fixed due of the month of L. the Patesi of Lagash".

As pointed out above (p. 234), according to the character of the Sumerian word stems, almost every one of them has a substantival or a verbal meaning, and with prefixes, infixes (of verbs), or affixes of particles are used unchanged both as nouns and verbs: *ab-a-ni* "his father" and *in-ab* "he talked" (Akkadian *šibû*) [with the authority of a father]". But that class of words too, which we call adjectives are in Sumerian the naked word stem, hence suffixed to the noun of which it states something, e. g. *im dugud*, Akkadian *šāru kabtu*; *anšu tur*, Akkadian *imēru šihru*; but *dugud* is also used as a pure noun = Akkadian *mištu* "collapse, fall, decay" owing to the extension of the meaning of *dugud* "heavy, weighty, to oppress".

Above we quoted two lengthy "nominal sentences", on p. 243 beginning with *sib₂-zi* . . . and on this page with *sa₂-dug₄* . . .; in my opinion these and the "verbal sentences" formed the nuclei of the Sumerian language, originally, I suppose, in a continuous chain, so that the prefixes, infixes, suffixes, and postpositions alone determined the meaning of the word chain as regards the use of the unaltered indeclinable word stems in one connection or another.

B. Hence we note with a certain interest that the Sumerian separate personal pronouns and suffixes form a complete system for all three persons in the singular and the plural, and that within this a distinction is made between the nominative and the accusative on the one hand and the indirect cases on the other. I do not doubt that at any rate as far as the separate personal pronouns are concerned they show

influence from Akkadian, original pronominal suffixes being the foundation on which the system rests. The Sumerian pronominal suffixes are 1. person sing. *-nu*, (*-na₂*), 2. person *-zu*, (*-za*); 3. person *-(a)-ni*, (*-na*) and *-bi*, (*-ba*), the difference between the use of the two forms of the 3. person depending on the personal or the objective character of the noun (Sollberger: "animée -inanimée," see below p. 262), e. g. *sib₂-a-ni* "his shepherd"; *ki-bi* "his (its) place". 1. person plur *-ne*; 2. person *-zu(e)-ne-ne*; 3. person *-(a)-ne-ne* or *-bi(e)-ne-ne*, *-bi(e)-ne*. Whether the variants in the singular with the vowel *-a* originally denoted the indirect cases or were the result of vowel assimilation cannot be decided with certainty.

The formation of adverbs from adjectives is expressed by the postposition *-šu₂* (var. *-eš₂*, *-eš*), e. g. *zi(d)-de₂-eš₂ mu-gar* "he behaved loyally (graciously)"; originally *zid* > *zi* + *da* (phonetic complement) + *šu*, here the final vowel drops out in *-šu*, and the vowel of the phonetic complement is assimilated to the word stem, hence *zi-de₂-eš₂* in writing, actually **zid-e-š*; *gar* "to do" (*mu-* is the verbal prefix, see below). In this connection it is impossible not to recall the Akkadian adverbial ending *-iš*, which von Soden¹ supposes to be identical with *-š* in the dative form of the Akkadian personal pronoun; that there is a correlation I feel convinced; the Sumerian *-eš* forms are especially used in the period of the Ur III Dynasty. An earlier Sumerian adverbial form is adjective + suffix *-bi* (: *-ni* : *-na*), e. g. *gal-bi* (Akkadian *rabiš* or *rabiš*), *gibil-bi* (Akkadian *eššiš*).—From the time of the late Sumerian period *u₂* is used as a copula, no doubt owing to Akkadian influence; in the early period the words were either simply juxtaposed, e. g. *an-ki-a* "in (the locative postposition *-a*, see p. 242) heaven and earth", or the postposition *-bi*, *-ba*, perhaps originating from the pronominal suffixes, was used, e. g. *anšu tur-mah-ba* "little and big ass (*anšu*)".—A large number of prepositions and conjunctions² are employed in the period of the later Sumerian literature; perhaps the further division into parts and the grammatical development is in some degree due to Akkadian influence or to the adaptation of the linguistic material by Semitic scholars and scribes.

C. Verbs. a. In the "verbal sentence" we meet with the oldest and perhaps only way of expression in the Sumerian language, the nominal

¹ *Grundriss d. akk. Gr.* (1952), p. 88: § 67 "Der Terminativ-Adverbial auf *-iš*".

² See e. g. Delmel, *Sum. Gr.* (1939), pp. 132-38, where 65 in all are enumerated.

parts being probably placed in front when incorporated in the verbal chain, compare the verbs called compound by us. The nucleus of the Sumerian verbal sentence is the root itself, e. g. *gar*, "to do", which as a rule is the last link in the verbal chain, and always in the case of compound verbs as e. g. *su₃ . . . il₂* "hand + raise = pray"; *ki . . . gar* "earth + to do = find something on the earth"; *ki . . . tum₃* "earth + carry, bring, take, i. e. bury". Suffixes may, however, be added, and terminate the verbal chain, just as prefixes and infixes may be placed in front of the verbal root, so that a complete survey of all the links of the "verbal chain" will have the following appearance: (1) the nominal element in the so-called compound verbs, e. g. *š_u₃-*; *ki-* (see above) + (2) the conjoining modal prefix or (3) the verbal prefix + (4) the infix + (5) verbal root + (6) the conjoining final suffixes.

b. (1) and (5) have been discussed above, in group (2) we find the prefix *ga-* (e-S *da-*) of the voluntative, the optative prefix *he₂-* (*hi-*, *hu-*, *ha-*; e-S *de₃-*) as well as prefixes denoting the imperative *u₃-* and negation, or rather prohibition, (negative optative): *nu-*; *nam-*; *ba-ra-* (compare below pp. 261 ff.). The imperative can, however, also be expressed by the verbal root and the prefix changing places, the prefix being placed last, e. g. *ab-gin* "he goes"; *gin* as a word stem has the sense "go, send, stand fast", with the prefix we may translate as above, but also "went, will go etc.", "he" too is vague, it may be "I", "you", "she", "it". In contrast with *ab-gin*, *gin-na-ab*, where *-na-* is the phonetic complement to the verbal root, denotes the imperative "go".

c. Group (6), the final suffixes, comprises pronominal possessive suffixes; plural suffixes, of which we may especially mention *-eš₃*, (with phonetic vowel alternation) and *-ene*, which according to Sollberger¹ is used respectively with affirmative, factive indicatives, and with affirmative adventive indicatives (see also below p. 249); all the nominal postpositions (see pp. 242-43) minus *-dim₃*, *-kam*, and *-dam*, i. e. *-e*; *-da* (*-de₃*); *-a*; *-la*; *-š_u₃*; *-ra*; and *-am₃*. Their use with the word stem now functioning as what we call verbs in distinction from nouns is often identical with what we mentioned under the "declension" of the nouns on p. 242 above. The following should, however, be noted: *-am₃* as a verbal suffix would seem to underline that the action is lasting; *-da* (: *-de₃*) appears to give the verbal root what we call an infinitive mean-

¹ *Le système verbal . . .* (1952), p. 188; cf. also Delmel, *Sum. Gr.* (1939), pp. 213-14.

ing, while *-a* seems to denote a participial sense. The verbal suffix *-a* is not the locative nominal postposition but they have perhaps a common origin: *-ak/g*, the genitive postposition of nouns. We have seen *-a* employed with what we call verbal nouns; as a verbal suffix having another function we find it with the verb in relative clauses, since every relative clause can be regarded as an extension of a noun in the genitive.

d. Independent of the nominal suffixes, and independent verbal suffixes are *-e* (nasalised *-en*) and *-ed-*. In the conception of the functions of these suffixes we meet with the great schism within Sumeriology. The verbal paradigms¹ of Poebel show that this scholar, on the basis of Akkadian philological texts and late literary texts has been able to reconstruct a Sumerian finite verb, the two main groups of which are transitives and intransitives, and the tenses of which are the present—the future and the preterite, and which is not appreciably different from an Indo-European or Akkadian finite verb. Deimel, on the other hand, who rejects the Akkadian philologists' grammatical propositions declares: "Es gibt keine Subjektselemente beim Verbum und daher kein Verbum finitum";² A. Falkenstein and E. Sollberger³ follow Deimel in so far as they both use the term finite verb, pointing out that it is a purely practical term, which does not denote any relationship between the Sumerian verb and that of the inflected languages: "Der Terminus ist ausschliesslich aus praktischen Gründen gewählt und soll keine Verwandtschaft mit dem "finiten Verbum" flektierender Sprachen bezeichnen".⁴

But Falkenstein,⁵ like Poebel, maintains the distinction between the transitive and intransitive verb, an element which is of capital importance in the two scholars' otherwise deviating theories of the tense formation even though he realises that "Die Termini "transitiv" und "intransitiv" sind möglicherweise für das Sumerische etwas zu modifizieren".⁶ To Poebel⁷ *-e* is the subject element for the 3. person sg.

¹ *Grundzüge d. sum. Gr.* (1923), pp. 301–22.

² *Sum. Gr.* (1939), p. 216.

³ *Le système verbal . . .* (1952), pp. 32 ff.

⁴ A. Falkenstein, *Grammatik der Sprache Gudeas von Lagas* (1949–50), p. 150^a (*Analecta Orientalia* 28–29).

⁵ *OLZ* 1931, coll. 791 ff.; *Gram. d. Spr. Gudeas . . .* (1949–50) §§ 48–54.

⁶ A. Falkenstein, *Bibliotheca Orientalis* 6 (1949), p. 53^a.

⁷ *Grundzüge d. sum. Gr.* (1923), pp. 58, 175, 255 ff.; C. J. Gadd takes a similar view of *-e* in *A Sumerian Reading-book* (1924), pp. 34–35.

in the transitive finite verb, and indirectly of a present-future sense, since *-e* < the demonstrative element *-e* and is equivalent to the nominative postposition; while *-ed-* to Poebel denotes the present-future of the intransitive finite verb. Deimel¹ dismisses all discussion of a subject element and does not know of any distinction between transitive-intransitive in the Sumerian verb, though he thinks he may venture the conjecture that *-e* is a tense suffix which gives the action a sense of present-future, even though certain verbal forms with *-e* must be rendered as preterite; according to Deimel *-e* is derived from *-ed* "oriens, aufgehen, ausgehen"² and is equivalent to *e₃*.³ Falkenstein's standpoint, deviating from Poebel's may be formulated thus: the verbal suffix, which is the same as the nominative postposition *-e* is lacking in the intransitive and passive verb.⁴

In 1935 Thureau-Dangin⁵ dismissed the difference in the conception of *-e* in transitive and intransitive verbs respectively, and in 1934, as cited above on p. 237, Poebel indirectly cancelled his own Sumerian verbal system. Deimel does not in his *Šumerische Grammatik* (1939) draw any distinction between transitive and intransitive verbs, and in 1943 R. Jestin⁶ entirely rejected the existence of such a distinction in Sumerian. But like Deimel (see above) he recognised the existence of preterite forms in *-e*. It is doubtful, however, whether Jestin's examples will pass muster before a closer test.⁷

The answer to Falkenstein's distinction between Sumerian transitive and intransitive verbs came from E. Sollberger in his outstanding contribution *Le système verbal dans les inscriptions "royales" présargoniques de Lagaš* (1952).⁸ Precisely because Falkenstein's large grammar is based exclusively on the Gudea texts which, it is true, are c. 300 years later than Sollberger's text material, but must nevertheless be regarded as linguistic matter of almost purely Sumerian character, it is of decisive importance to hear Sollberger's pronouncements which are the result of a profound study of the earliest Sumerian linguistic remains

¹ *Sum. Gr.* (1939), pp. 166-70.

² *Ibid.* p. 170.

³ *Ibid.* p. IV.

⁴ *Gram. d. Spr. Gudeas* ... (1949-50), §§ 23-24, 27.

⁵ *RA XXXII* (1935), p. 197¹.

⁶ *Le verbe sumérien I* (1943), p. 87 (*Études Orientales VII*).

⁷ Cf. E. Sollberger, *Le système verbal* ... (1952), p. 184.

⁸ Cf. also the detailed review by K. Oberhuber, *OLZ* 49 (1954).

from pre-Gudean Lagash: "dans les textes étudiés ici on ne voit pas la moindre différence sémantique explicable par la transitivité ou l'intransitivité du verbe . . . Les textes qui ont servi de base à la présente étude ne faisant pas ressortir de différence sémantique entre verbe transitif et verbe intransitif, je n'ai tenu aucun compte de ces notions et, ce paragraphe terminé, il n'en sera plus question au cours de cet ouvrage"¹

What can be said about the verbal suffixes *-e* and *-ed* is due to a close analysis of all the passages in the texts where they occur. Instead of following Poebel's "Indo-European" Sumerian verbal system I am of opinion that research might profit by taking as a fresh starting point for the study of the Sumerian verb Sollberger's verbal scheme, which it must be for the future to confirm, or perhaps alter by additions etc.:

A. Indicative	{	I. Factive:	1. Affirmative	2. Negative
			3. Assertive.	
		II. Adventive:	1. Affirmative	2. Negative
			3. Assertive.	
		III. Achronic.		
B. Imperative.				
C. Subjunctive	{	a. Volitive:	1. Affirmative	2. Negative.
		b. Suppositive.		

The factive comprises verbal forms which we may render by the present or the past, "c'est donc l'énoncé d'un fait",² the adventive "correspond généralement un futur . . . caractérisant l'annonce d'un événement"³ whereas in the achronic indicative the time element has been neutralised. Into Sollberger's volitive enters what is otherwise in Sumerian grammar called cohortative or volutative and precativ or optative, cohortative being regarded as a special case of the 1. person precativ.

While the infixes, group (4) in the "verbal chain" (see p. 246), of which we shall speak later, may be used everywhere in the verbal system, the units of Sollberger's verbal scheme are characterised thus: A. by prefixes, of which later; B. by the transposition of the verbal root and

¹ Sollberger, *ibid.* pp. 36-37.

² *Ibid.* p. 56.

³ *Ibid.* p. 56.

the prefix mentioned on p. 246; C. a. 1. by the prefixes *ga-* or *ha-*, C. a. 2. by *bara-* and C. b. by *u₃-* (the modal prefixes, see p. 246). As to suffixes none are present in A. 1. 1. and C. b., whereas A. II. and a. are characterised by *-e*, while A. III. sometimes has *-e* and sometimes is without a suffix.

As regards the relation between *-e* and *-ed-* the text material from pre-Sargonic times, i. e. the earliest known use, would seem to show that *-ed-* is only used in connection with *-e*, which is placed after *-ed-*, without this seeming to add anything to the suffix-*e*'s semantic value, though perhaps it gives it a more emphatic sense. *-e* is only known with a consonantal final verbal root. Syntactically *-e* expresses a consecutio temporum, a first clause in the suppositive subjunctive being followed by an adventive indicative clause to which *-e* (: *-ede*) is suffixed: supposing that such a thing happens, the consequence will be . . .¹

e. The verbal infixes (group (4) in the "verbal chain"). The first to point out that one of the peculiarities of the Sumerian language was the incorporation in the verbal complex of grammatical relations already expressed in the nominal clause was G. Bertin in *L'incorporation verbale en Accadien*.² Since those days (1885) a series of researches have led to the generally recognised result that the infixes denote the incorporation in the "verbal chain" of adverbial parts of the sentence (dative, ablative) and placed before the verbal root; infixes are incorporated in the "verbal chain" as a result of what is treated and stated in the first part of the chain which comprises the nominal clause (see above p. 244). The infixes are: *-na-* "Latin ei"; *-ne-* "Lat. eis"; *-ra-*; *-ri-*, the personal pronoun of the 2. person in the dative and the dative designation, as first ascertained by Thureau-Dangin;³ *-ni-* "in, Lat. ibi" (locative infix); *-da-* (: *-da₃-*, *-de₃-*, *-du-*, *-di-*, *-li-*, *-le-*); *-la-*; *-šū₃-* (: *-še-*, *-ši-*, *-eš₃-*); the three latter repeat the ablative, causal, and instrumental aspects from the nominal clause. Each of these infixes may assume nunation, mimation, and bimation, e. g. *-na-*: *-nan-*, *-nam-*, *-nab-* etc. Of the shades of sense that may appear here we know nothing. Examples: (1) *mu-na-du₃* "he built (*du₃* "to build", *mu-* verbal prefix)

¹ Cf. Sollberger, *ibid.* pp. 181-86; an earlier work treating the same text material as Sollberger + Falkenstein with regard to the verbal suffixes viz. V. Brummer, *Die sumerischen Verbal-Afformative nach den ältesten Keilschriften bis herab auf Gudea (ca. 3300 v. Chr.)* (1905) I cannot follow any more than earlier works by J. D. Prince.

² *RA* I (1885), pp. 105-115; published separately in 1886.

³ *ZA* XX (1907), p. 384.

for him"; (2) *lugal lugal-e-ne-ir ba-ra-ra-an-dim₂-ma*, "(a, the) king, for the kings he had not done for them"; *dim₂* "to do, to build", *-ma* phonetic complement, perhaps + *-a* < *-ak*, indicating a relative clause (see above pp. 243, 247): "who had not" etc.; *-e-ne* plural postposition; *-ir* < *-ra* dative; *ba-ra* "not" see p. 246; *-ra-an-*, the dative aspect incorporated in the verb with nunation, repeating the *-ir* of the nominal complex; (3) *al-ne-dug₄* "he talked to them" (*dug₄* "to talk", *al-* verbal prefix) i. e. "he commanded them"; (4)^d *nin-sikil-a-da a₂-mu-da-ag₂* "to N. word or command had been sent": *a₂* . . . *ag₂* "compound" verb, *mu-* verbal prefix, *-da-* is incorporated and repeated from the postposition *-da* of the nominal clause.

In the estimate of the morphology of the infixes, too, we meet with a difference of opinion among Sumeriologists. Fr. Delitseh (1914)¹ points out as a result of Thureau-Dangin's above-mentioned observation of the pronominal character of *-ra-* that the infixes denoted the 3rd, the 2nd, and probably also the 1st person in the dative and accusative sense. Poebel (1923)² further elaborated this and built up a complete paradigm for all subject elements of pronominal character inherent in the active preterite and to which infixes had been attached. But the aspects which Poebel of his own accord designated by the "Indo-European" terms active and intransitive present-future, and intransitive preterite, are not mentioned in his large grammar. C. J. Gadd³ (1924), who did not know Poebel's grammar,⁴ however, distinguishes between pronominal and adverbial infixes. The pronominal infixes are given in the singular and the plural, and then in forms denoting partly the direct and partly the indirect objects:

A. Pronominal		B. Adverbial
Direct object	Indirect object	
Sing. <i>ni</i> (: <i>ni-in</i> , <i>ni-ib</i>)	<i>na</i> (: <i>na-an</i> , <i>na-ab</i>)	<i>-ra</i>
Plur. <i>nen</i>	<i>ne</i> or <i>nen</i>	<i>-da</i>
		<i>-la</i>
		<i>-ši</i>

But the same year Anton Deimel in the first edition of his Sumerian grammar⁵ dismissed all Poebel's reconstructed subject elements in

¹ *Kl. sum. Sprachl.* (1914), pp. 76-81, 83-84.

² *Grundzüge d. sum. Gr.* (1923), pp. 188 ff.

³ *A Sumerian Reading-book* (1924), p. 40.

⁴ *Ibid.* p. V¹.

⁵ *Sumerische Grammatik der archaischen Texte . . .* (1924).

connection with the infixes and actually only accepted *-ra-* as being of a pronominal character, the dative of the third person singular, while at the same time its rare occurrence as a general dative infix was established. Further Deimel pointed out that the *-na-* and *-ne-* infixes denoted the dative relation in the singular and plural respectively. Nunation, mimation, and bibation were regarded by him as of merely phonetic significance and herewith he dismissed earlier views about nunation immediately in front of the verbal root denoting re-incorporation in the "verbal chain" of the accusative. Finally Deimel called attention to several earlier Sumerian verbal complexes without infixes, only consisting of the verbal prefix plus the root, e. g. *nu-du₃*, *in-du₃*. Deimel implicitly maintained his views in the second edition of his grammar of 1939.

On the other hand, A. Falkenstein,¹ in his large Gudea grammar of 1949-50, presents a theory which is clearly analogous to that of Poebel as regards the infixes, and in which he demonstrates a personal element in all infixes in addition to a subject element; whereas Sollberger² arrives at another result. After profound study of the pre-Sargonic texts he, like Deimel, denies the existence of a subject element but continues Gadd's and Deimel's division of the infixes into two groups, the pronominal and the non-pronominal infixes. The first, for which tables are set up, covering, though only partly, the 1.-3. persons singular and the 1.-3. persons plural, denote the accusative, the dative and the terminative: the difference between the accusative and the terminative Sollberger, referring to the latter, expresses thus: "il marque l'objet direct en tant que point d'aboutissement du "procès". Il comprend donc une notion de mouvement du sujet vers l'objet, qu'on ne trouve pas nécessairement dans l'accusatif".³ The non-pronominal infixes denote the directive (*-še₃-*, *-ši-*), ablative (*-la-*), locative (*-ni-*, *-n-*, *-mi-*), and comitative (with a shade of the sense of the instrumental: *-da-*, *-da₄-*, *-di₃-*).

Sollberger's system of pronominal suffixes gives food for reflection. The yawning gaps in the systems presented, which only cover the third persons singular and plural, however, point plainly in the direction of Deimel's considerations. On the other hand, we must be grateful to

¹ *Gram. d. Spr. Gudeas* I (1949), pp. 194 ff.

² *Le système verbal . . .* (1952), pp. 62-106.

³ *Ibid.* p. 77.

him for doing away with Poebel's "Indo-European" infix-inflection in Sumerian and because like Deimel he dismissed the constructed inherent subject elements. There is still much work to do before we get to the bottom of all the facts concerning the Sumerian verbal infixes. But thanks especially to Deimel and Sollberger the main lines are clear: the incorporation of the infixes in the "verbal chain" denotes a repetition of the statements contained in the individual parts of the nominal clause. Thus at least we express the train of thought: we begin with the noun and all the parts governed by it, terminating the chain in the verbal complex. But originally we may suppose it was quite the contrary in Sumerian; only a "verbal chain" existed in which all the links (those too which we call nouns) were governed by the meaning contained in the verb, the nominal parts being only segregated later.

f. The verbal prefixes (group (3) in the "verbal chain"). These are in a way the essential elements of the verbal complex and more important than the verbal root itself, since it is the verbal prefix which gives the word stem its verbal value. The infixes, on the other hand, which contribute to give the Sumerian language its distinctive stamp, may, as pointed out above, be absent without the verbal root losing its verbal sense. The modal prefixes have been discussed above, p. 246. The vast number of problems which the Sumerian verbal prefixes present to researchers have in the course of time been solved in various ways: as an introduction it will repay the trouble to take a survey of the different theories that have been put forward. We present them in chronological order.

In a short but ingenious paper *Sur les préfixes du verbe sumérien* François Thureau-Dangin in 1907¹ pointed out the importance of the verbal prefixes as indicating the direction of the movement of the root, under which the individual parts of the verbal complex were subordinated. But the next year in the paper *Das Verbum im Sumerischen*, Arno Poebel² opposed this theory in favour of a tense-forming function of the verbal prefixes. These two different conceptions of the real nature of the prefixes were later to be further elaborated and came to signify the two schismatic basic conceptions.

In Stephen Langdon's and Friedrich Delitzsch's Sumerian grammars from 1911 and 1914 respectively we notice little about the two

¹ ZA XX (1907), pp. 380-404.

² ZA XXI (1908), pp. 216-36.

aforementioned theories. Langdon¹ divides the prefixes into 4 groups (the *m*, *n*, *b*-groups, to which is added a fourth prefix *e*), whose vowels vary according to "principles of harmony" and whose consonantal elements apart from the *m*-group, are assumed to be of a demonstrative pronominal origin. The prefixes have the function "not only of indicating the connection between the verb, which almost invariably ends the sentence, and the subject, but of indicating its connection with the object, if the verb be active, and with the principal adverbial element which precedes". As regards the use of the prefixes Langdon thinks that *e* "is never employed except as subject", while "only *ni* and *bi* are regularly employed for the object", further it is emphasised that "the vowels of the prefixes have the force of case endings", thus the *e*-prefix is "clearly identical with the ending of the status rectus". It is apparent from these considerations on the prefixes that Langdon is throughout thinking in terms of nouns, not in terms of verbs.

Delitzsch,² on the other hand, is the first to strike into the dangerous path of regarding the Sumerian verb as analogous with the Indo-European or the Semitic verb. He regards the prefixes as regular subject elements so that most of them denote the third person singular, thus:

A. *e-* (: *e-ne-*; *e-ma-*; *in-ma-* (*e-S inga-*).

B. the *n-*, *b-*, and *m-* series:

1) *ne-*, *ni-*; *ba-* (: *bi-*); *mu-*, *ma-*, (*mi-*)

2) *nen-* (: *neb-*); *ban-*, *bab-*; *mum-*, *mam-*, (*mib-*)

3) *in-*, *an-*; *ib₂-* *ab-* (: *ub-*); *im-* (: *um-*), *am-*

C. *al-*

while as the subject prefix of the first person Delitzsch only notes: *mu-*, *ma-*, *mi-*, *im-* (?). No explanation nor any attempt at it is given of the 27 different subject elements of the 3rd person.

On the other hand, it fell to the lot of Arno Poebel, in continuation of his above-mentioned considerations of 1908 to demonstrate in an astonishing, very learned and thoroughgoing grammar³ that the Sumerian language was a kind of Indo-European, so far as the verbal system was concerned. Poebel's extraordinary contribution has been regarded

¹ *Sum. Gram.* (1911), pp. 131 ff.

² *Kl. sum. Sprachl.* (1914), pp. 68-76.

³ *Grundzüge d. sum. Gram.* (1923), pp. 213-54.

as the fundamental work of Sumeriology and has founded a school, not least in the U.S.A. And on account of Poebel's connection with the University of Chicago, it has influenced the Sumeriologists of the outstanding Assyriological Chicago school, and this in spite of the fact that A. Deimel has continually since 1924 issued a warning on this point, and, what is more important, Poebel himself, after publishing a special investigation on the *e-* and *i-* prefix in 1931 (see above p. 237¹), actually in 1934 demolished his own Sumerian stronghold, as mentioned on p. 237 above, whose foundation was the post-Sumerian Akkadian scribal schools, and as a consequence hercof abandoned Sumeriology after 1934.

Poebel argues as follows. There are seven verbal prefixes, on the one hand: $NI = i_3- < e$ "he, this",¹ the verbal element proper, uncompounded and contained in all the rest, so that $mu- < mu-i_3 < mu-e$; $al- < al-i_3$; $bi- < bi-i_3$ etc., and on the other hand: six prefixes, e. g. *mu-*, *al-*, *bi-*, *immi-*, *ba-*, and *imma-*.

(1) i_3- owing to its origin is unaffected by differences in the kinds of action and in tense and may make transitive as well as intransitive, present-future, as well as preterite, forms. However, in contrast with the rest of the verbal prefixes, i_3- as a prefix gives a shade of difference in the meaning as regards time, the verbal form being by it oriented from the instant present. Hence the preterite $>$ the perfect, i. e. the past regarded from the point of view of the present, e. g. i_3-gub "he has placed himself", in contrast with the timeless preterite (see below) denoted by the prefix *mu-*: *mu-gub* "he placed himself". In the present-future the i_3- prefix designates the instant present or future regarded from the point of view of the present e. g. $i-du_3-e^2$ "he is building now" or "he will (from now on) build", whereas *mu-du_3-e* means "he will build (some time)". Poebel further remarks that $i_3- > a-$ under special phonetic conditions and that, since special "subject elements", constructed by Poebel (see p. 251), both suffixal and inherent in the infixes, denote the verbal subject, i_3- , besides the 3. person singular, also later denotes the 1. and 2. persons singular. That i_3- alternates with *mu-* in the same verbs under the same syntactic conditions does

¹ Cf. especially Poebel, *The Sumerian Prefix Forms e- and i- ...* (1931); the mode of writing i_3- (Poebel: *l-*), and the idea that $i_3- < e-$ was originally derived from a remark by Thureau-Dangin, *RA* XI (1914), p. 101.

² On Poebel's conception of the final *-e*, see above p. 247.

not, however, support Poebel's temporal distinction between i_3 - and mu - verbs.

(2) mu - (: ma -) like all the rest of the prefixes mentioned by Poebel is originally compounded with $-i_3$ as noted above, and in the preterite designates the timeless past = imperfectum, in the present-future the timeless present (historical present) or future action; for examples see above under i_3 -.

(3) al - as a verbal prefix is in the main known from post-Sumerian times and denotes what we in Akkadian call the permansive (stative) or intransitive preterite. al - may alternate with i_3 - and always with verbs of a permansive character and meaning, such as me , gal_2 , $maḥ$, and $babbar$ = Akkadian $bašû$, $bašû$, $rabû$, and $pišû$.

(4) bi - (: bbi -: mbi -) contains a dimensional element "thereon, there-over, there" and is equivalent to i_3 - and mu - when these two prefixes are combined with the locative infix $-ni$ -, e. g. i_3-ni -, $mu-ni$ = bi -.

(5) $imni$ - is likewise a prefix of dimensional character.

(6) ba - (: bba -: mba -), which in post-Sumerian scribal schools is used where the corresponding Akkadian verbal forms are the infixed $-la$ - stem modifications, is by Poebel determined as denoting medial reflexives with a retrospection besides the passive.

(7) the $imma$ - prefix is used to express the dimensional reflexive idea.

Finally we may mention that Poebel¹ finds a causative transitive element $-n$ - (: $-b$ -) also with verbs which in themselves are transitive; the examples are taken from post-Sumerian texts with an Akkadian translation, e. g. i_3-n-du_3 . Poebel supposed that this $-n$ - was originally the accusative infix of the 3. person; by R. Scholtz² it was identified with the subject element.

We see that Poebel, as regards the prefixes bi -, $immi$ -, ba -, and $imma$ - has learnt from Thureau-Dangin's directionalistic views (see p. 253), but the odd constructive part of Poebel's line of thought predominates, e. g. in his reflections on the origin of the prefix $imma$ -,³ which he formulates thus: $e + ma$, later $i_3 + (m)ma$, whose latter part ma < $mi-i$ -'- a < $b-i$ -'- a or was identical with ba -, the order of the individual components being merely reversed: i_3-b-i -'- a > $i-m-i$ -'- a > $imma$ - and $b-i_3$ -'- $a-i$ > ba -.

¹ *Grundzüge d. sum. Gr.* (1923), pp. 208 ff.

² *Die Struktur der sumerischen engeren Verbalpräfixe* (1934; MVAG XXXIX 2).

³ *Grundzüge d. sum. Gr.* (1923), pp. 252-53.

Poebel's verbal paradigms have been mentioned above on p. 247; there we rejected his Indo-European Sumerian, as he himself did indirectly in 1934, and with this his verbal prefix arguments are at the same time condemned.

C. J. Gadd¹ was, as already mentioned, unacquainted with Poebel's astonishing contribution in 1924; he erects three groups of prefixes: (1) *e-*, *al-*, (2) the *n*, *m*, *b* series, i. e. consonant + vowel or vowel-consonant:

mu-, *nia-*, *mi-* | *im-*
ni- (i. e. *i*₃-), *ne-* | *in-*, *an-*
ba- | *ib*₂-, *ab-*

(3) a number of closed syllables such as *mun-* (*nu-un-*); *man-* (*ma-an-*); *nen-* (*ne-in-*); *ban-* (*ba-an-*); *bab-* (*ba-ab-*). Gadd's considerations are worth listening to at a time when a Sumerian grammar prepared on the Indo-European model was available: "In themselves, these prefixes express neither voice, mood, tense, number nor person. Thus *in-du*₃² can mean "I built" as well as "he built" or even "it was built". The perfect plural also, *in-du*₃-*u*₃ "they built", might have the same prefix as the imperfect singular *in-du*₃-*e* "he builds". The term "subject-prefix" is therefore, strictly speaking, inexact; the presence of these elements merely indicates the subject, and their function is to take up and incorporate the external subject in the verb-complex, precisely as the infixed pronoun . . . takes up the external object".

And Gadd goes on to say: "It has been said above that many variant forms of this prefix are used . . . Except in a very few cases . . . it has not been possible to discover what principle, if any, governs the use of the various forms, or in what respect, e. g. *mu-du*₃ "he built", differs from *in-ag* "he reigned". For merely practical purposes it may be assumed that no material divergence of meaning is indicated by the use of one form in preference to another". The "very few cases" to which Gadd refers above, are instances in which the prefixes *ba-*, or less often *al-*, are associated sometimes with a passive or reflexive force. However, no one can follow Gadd's above-mentioned pronouncement "that no material divergence of meaning is indicated by the use of one form in preference to another". And already in the same year as Gadd, Deimel

¹ A *Sum. Reading-book* (1924), pp. 32-33.

² Here as elsewhere when Gadd is cited I have permitted myself to conform his numbering of the Sumerian word stems to that of our own time.

published his *Šumerische Grammatik der archaischen Texte* (1924), in which an attempt was made to determine the value of the meaning of several of the prefixes for the verbal complex.

Deimel's Grammatik was an extraordinary feat for, as compared with Laugdou, Delitzsch, Poebel, and Gadd, the Sumerian language was here for the first time surveyed and described grammatically as an agglutinative language, an idea which was further developed in the second edition of the grammar from 1939. Just as Lenormant and Brünnow are the great names of Sumeriology in the 19th century thus Anton Deimel, with the abovementioned grammar and his unexampled *Šumerisches Lexicon* (1925-37) in 7 folio volumes, an indispensable aid to Assyriologists as well as Sumeriologists, was head and shoulders above any other student of Sumeriology in the 20th century. Deimel's sure instinct is manifested in the fact that this grammar of 1924 takes account exclusively of the earlier Sumerian language; here Falkenstein and Sollberger are his indirect heirs.

Deimel was likewise, besides Maurus Witzel,¹ the first to continue and further develop Fr. Thureau-Dangin's ingenious hypothesis of the dimensional sense of the prefixes,² which Poebel, as we saw above, had only partially accepted. Deimel himself sums up his views as follows in the second edition: "Nach der 1. Aufl. meiner Š. Gr. haben alle Verbalpräfixe dimensionale Bedeutung, wie ebenso alle Infixe. Der Unterschied zwischen den Präfixen und Infixen besteht darin, dass die letzteren die Beziehung des Verbums zu den adverbialen Satzteilen herstellen, während jene den Begriff des Verbums selbst modifizieren, ähnlich wie das Substantiv, das bei zusammengesetzten Verben allen Verbal-Präformativen vorgesetzt wird. Diese Ansicht, dass die Verbal-präformative keine Art von Subjekts- und direkten Objekts-Elementen enthalten, sondern einzig dimensionale Bedeutung haben, wird in der 2. Aufl. der ŠGr. unverändert beibehalten und noch wirksamer begründet".³ It follows from Deimel's above-mentioned views that no Sumerian finite verb exists, but that all verbal forms are predicate nouns, to use his own words.⁴

Deimel's verbal prefixes are divided into three groups: (a) simple:

¹ *Untersuchungen über die Verbal-Präformative im Sumerischen* (BA VIII 5, 1912).

² See above p. 253; Thureau-Dangin's and Deimel's views are shared by A. Goetze, *JAOS* LVI (1936), p. 333.

³ *Šum. Gr.* (1939), p. IV.

⁴ *Ibid.* pp. V, 150, 216 f.

e (: *i* : *a* : *u*); *mu* (: *ma* : *ni* : *me*); *ni* (: *ne* : *na*); *bi* (: *ba*); *al*-(*b*) composite: prefix *e* (: *i* : *a* : *u*) can be put before or after the *n*, *m*, *b*-prefixes; whereas *al*- always precedes but can be followed by *m*, *n*, *b*-prefixes. – (c) Both simple and composite prefixes can, purely phonetically, be enlarged by nunation, mimation, or bibation, e. g. *ni*:- *nin*:- *nim*-, *nib*- etc. Poebel's *immi*- and *imma*-prefix is seen in Deimel as a result of the rule under (b) concerning composite prefixes, but Poebel's *Nl* = *i*₃-prefix (according to Poebel < -*e*) is, Deimel strongly emphasises, essentially different from *e*:- *Nl* can be read as *i*₃-, but he himself reads it as *ni*-¹.

As in Delitzsch (see above p. 254) and J. Aistleitner² the number of verbal prefixes in Deimel is thus between 25 and 30 but it should be kept in mind that Deimel's *b*. and *c*. groups are only extensions of the original five simple verbal prefixes. However, the composite prefixes as well as those subject to nunation, mimation, and bibation, besides being purely phonetic variants, must be capable of containing shades of meaning. It is, however, only about four of the simple prefixes that Deimel gives his opinion as to their meaning in the verbal complex; the fifth, *al*- which is only demonstrated late, is not mentioned. Deimel's result is as follows: "Die Präfixe *mu*-, *-ni*-, *e*-, *ba*-, haben bei den Verben der Bewegung lokale Bedeutung und zwar *mu* = latein. *ad*; *ni* (= *i*₃) = *in*; *e* = *ex*; *ba* = *ab*, und bilden mit dem Verbalstamm verba composita".³ For with a definite direction of motion we have always without exception the same prefix, even when the subject and object are changed, but as soon as the direction of the motion is altered the prefix too is altered, even if the subject and object remain the same. But Deimel also points out that where the verbs do not denote any local motion or are used in a transferred sense, the local meaning of the prefixes cannot be proved, "kann aber wie in allen andern Sprachen, welche verba composita bilden, vorausgesetzt werden".⁴ As regards all the rest of the verbal prefixes "scheinen (sie) auch dimensionale Bedeutung zu haben, wenngleich der konkrete Sinn der einzelnen noch nicht mit Sicherheit nachzuweisen ist".⁵ And finally we shall call attention

¹ *Ibid.* p. IV.

² *RA* XX (1923), pp. 70–71.

³ *Sum. Gr.* (1939), p. 148.

⁴ *Ibid.* p. 148.

⁵ *Ibid.* pp. 148–49.

to the following passage in Deimel: "Bei Verben, welche keine Bewegung ausdrücken, und bei denen die Präfixe mit ursprünglich lokaler Bedeutung im übertragenen Sinne verwendet werden, pflegen wir—wenigstens vorläufig—die Präfixe bei der Übersetzung vollständig zu vernachlässigen".¹

As will be seen, Deimel has with a certain monomania applied Thureau-Dangin's "théorie directionaliste" with the strictest consistency, Thureau-Dangin himself being of opinion that the prefixes *mu-* and *e-* could also have a subjective sense, whereas according to M. Witzel, Deimel's other predecessor in the dimensional conception, they could likewise have an objective meaning. But Deimel, as we saw above, has also independently indicated the shades of meaning of the four central prefixes.

At the same time as R. Jestin² in 1946 pointed out that the father of the dimensional theory, Fr. Thureau-Dangin, in the course of time had partly given up his 1907 hypothesis of the dimensional functions of the prefixes, Jestin himself³ issued a kind of revision of Thureau-Dangin's and Deimel's dimensional idea. Instead of the horizontal dimensions of these researchers, Jestin's system is a vertically dimensioned system in which the dominants are the upper sphere and the lower sphere, or absolutely: Gods and Man, relatively: upper-lower. Jestin's theory may give results in the study of sacred texts.

Edmond Sollberger's brilliant work about the pre-Sargonid Lagashitic verbal system, which we have often mentioned in the preceding pages, and the verbal scheme of which may be seen above on p. 249, has also subjected the verbal prefixes to a thorough investigation, which points beyond Deimel's dimensional idea. At the same time Sollberger is, generally speaking, definitely on Deimel's side, in contrast with Poebel-Falkenstein's Indo-European-minded view of the Sumerian language with their personal and subject elements, transitive and intransitive verbs. First an account is given of Sollberger's division of the prefixes,⁴ disregarding the composites and the prefixes enlarged by nunation, mimation, and bibation, which indeed mostly occur in late Sumerian texts:

¹ *Ibid.* p. 151.

² *Le verbe sumérien* II: Préfixes ... (1946), p. 38⁴ (*Études Orientales* IX).

³ *Ibid.* pp. 73–84.

⁴ *Le système verbal* ... (1952), p. 108.

	Affirmative	Negative	Assertive
Class I.	1. Nul-; <i>a-</i> ; <i>mu-</i> ; <i>e-</i> 2. <i>ni-</i> ; <i>bi-</i> ; <i>bi</i> ₂ -; <i>ba-</i>	<i>nu-</i>	<i>na-</i> ; <i>ši-</i> ; <i>še</i> ₂ -
Class II.	1. <i>ga-</i> ; <i>ḥa-</i> 2. <i>u</i> ₃ -	<i>bara-</i>	
Class III.	1. <i>eḡa-</i> (in the script: <i>e-ga-</i> after a consonant; <i>ga-</i> after a vowel) 2. <i>al-</i>		

Sollberger's comment¹ on this is that the prefixes of Class I serve to form the indicative, those of Class II the subjunctive, and that "les préfixes de la classe II se trouvent obligatoirement préfixés à un préfixe de la classe I." Sollberger's minute investigations of the individual prefixes² may be summed up as follows:

Class I. 1. Prefix Nul. Absence of the prefix often characterises the verbal forms as nominal forms, but the complex with the prefix Nul can never function alone as a sentence, hence absence of the prefix is irreconcilable with infixes in the verbal complex.

Prefix *a-*, which rarely occurs, serves solely to make the verbal forms A. III., (see p. 249), i.e. achronic indicatives. Sollberger points out the independence of this prefix in contrast with Deimel³ and Jestin⁴ who regard *a-* as a phonetic variant of *e-*, and with Poebel-Falkenstein⁵ who think that *i*₃- becomes *a-* under special circumstances.

Prefixes *mu-* and *e-*. In their view of these Sollberger's and Falkenstein's results are exactly the same,⁶ an interesting fact, since Sollberger⁷ did not know Falkenstein's arguments. That these two prefixes alternate was mentioned above when Poebel's prefix system was discussed (see p. 255). The results of the concerted efforts of the two researchers are given here in Sollberger's⁸ words: "Lorsque l'objet

¹ *Ibid.* p. 109.

² *Ibid.* pp. 111-176.

³ *Sum. Gr.* (1939), p. 140.

⁴ *Le verbe sumérien* II (1946), p. 42.

⁵ Poebel, *Grundzüge d. sum. Gr.* (1923), p. 217 f.; Falkenstein, *Gram. d. Spr. Gudeas* I (1949), p. 180.

⁶ Cf. Falkenstein, *ibid.* II (1950), §§ 112-14 and Sollberger, *Le système verbal...* (1952), pp. 121 f.

⁷ *Ibid.* pp. 64, 121.

⁸ *Ibid.* p. 122.

du verbe (principalement le datif) appartient à la classe animée et que l'on veut mettre en évidence le fait que le verbe a un objet appartenant à la classe animée, on emploie le préfixe *mu-*; si, en revanche, l'objet du verbe appartient à la classe inanimée, ou si on ne juge pas utile de souligner le fait que le verbe a un objet appartenant à la classe animée, on emploie le préfixe *e-*."

Class 1. 2. The prefixes are divided into two groups, the locativistic (spatial) *ni-*, *bi-*, *bi₂-* and the diathetic *ba-*, which gives the verbal complex a medial and, now and again, a passive sense. With respect to *ba-* Sollberger agrees with Langdon¹ and Poebel,² whereas with regard to the locativistic *ni-* he is at one with Deimel³ both as to the sense and in his rejection of Poebel's *NI* = *i₂-* (see above p. 255) as well as Poebel's theory that *i₂-* < *e-*, which he tried to give grounds for at great length in 1931.⁴ The fact that the verbal prefix *e-* has disappeared entirely at the time of Gudea affords no support to Poebel's theory, and as far back as 1934 Falkenstein⁵ argued in favour of regarding *i₂-* and *e-* as two quite different prefixes. Sollberger⁶ considers himself justified in reading *NI-* as *ni-* in pre-Sargonic Lagash texts, but in the last stages of Old Sumerian and at any rate from the beginning of Neo-Sumerian the prefix was pronounced *i₂-*.

Now Sollberger thinks he can declare: "... entre ce préfixe *i-* et l'ancien préfixe *NI-*, il n'y a de commun que la graphie: ce sont deux préfixes différents"; after this follow interesting constructions meant to show how, within four developmental stages that do not run parallel, both the prefix *e-* and *NI* = *ni-* become *i-*. Calling to mind Sollberger's result that prefix *e-*'s shade of meaning denoted that the verbal object belonged to "la classe inanimée", and that *ni-* is a prefix relating to the locative, his four developmental stages, which are solely of a phonetic character while the semantic function of the prefixes is declared to have ceased, do not seem very convincing. And we miss an explanation of the semantic value of the new prefix *i₂-* in the "verbal chain". It is true that it is employed in post-Sargonic texts

¹ *Sum. Gram.* (1911), p. 136.

² *Grundzüge d. sum. Gr.* (1923), pp. 243 f.

³ *Sum. Gr.* (1939), p. 148.

⁴ A. Poebel, *The Sumerian Prefix Forms e- and i- ...* (1931) (*Or. Inst. Assyriological Studies* No. 2).

⁵ *OLZ* 1934, col. 298.

⁶ *Le système verbal ...* (1952), pp. 147 f.

and in so far does not concern Sollberger's researches, but his silence on that point gives no strength to his arguments in this connection. That i_3- : u_3- in the verbal complex of the form C.b. (see p. 249) i.e. suppositive subjunctives in pre-Sargonic Lagash texts,¹ does not take us any further.

The prefix $bi-$ alternates with bi_2- (NE) as graphic variants. In 1936 S. N. Kramer² suggested that $Bi-$ should be read be_2- and that be_2- : bi_2- in the same way as Poebel's $e-$: i_3- , but I am unable to agree with him, amongst other things because Poebel's analogy $e-$: i_3- is incorrect.

The difference in the use of the two locativistic prefixes $ni-$ and $bi-$ cannot be demonstrated; we merely know that $bi-$ (: bi_2-) is never followed by infixes, whereas $ni-$ takes both accusative, terminative, and locative ($-ni-$) infixes. The difference which is found between the suffixes $-(a)ni$ and $-bi$ (see p. 245) in the suffix of the third person representing respectively the personal ("animée") and the factual ("inanimée") relation of the noun it seems tempting to Sollberger³ to transfer to the locative $n-$ and $b-$ prefixes, but he abstains from doing so as there is no foundation in facts.

Class II. 1. Prefixes are used in verbal complexes of the C.a. form, i.e. in the affirmative and negative volitive subjunctive, so that $ga-$ denotes the cohortative (1. person) and $ha-$ the precative (2. and 3. persons). Sollberger points out that in pre-Sargonic texts $ha-$ is seen to be the basic form of the precative, and that the he_2- used in the period that follows is a result of "la superposition par éclipse de $ha-$ et de $e-$."⁴ Such statements cannot win applause, they bear witness to the strong indirect influence Poebel's construction has exerted on the Assyriologists of later times; Sollberger in fact admits: "je recon- nais volontiers, . . . qu'on ne voit pas trop pourquoi $ha-e-$ donnerait $he-$, alors que $ga-e-$ donne $ga-$ et non $ge-$."⁵ Nor can the possible occurrence in the shades of meaning of the verbal complex through the incorporation of "préfixe inanimé" ($e-$) be demonstrated.

Class II. 2. u_3- denotes supposition in the suppositive subjunctive sentences and may, as mentioned above, alternate with i_3- . As to the

¹ Sollberger, *ibid.* pp. 148, 170-71.

² *The Sumerian Prefix Forms be- and bi- in the Time of the Earlier Princes of Lagash* (1936; AS No. 8).

³ *Le système verbal . . .* (1952), p. 157.

⁴ *Ibid.* p. 163.

⁵ *Ibid.* p. 164.

use of u_2 - to denote the imperative, which has been eagerly discussed¹ since the time of Delitzsch,² Sollberger has again attempted to give a constructive explanation which implies that the imperative can be defined as follows: "ordre donné à un tiers, d'où forme de la 2^e personne."³ The exchanging of the prefix + the verbal root for the verbal root + the prefix to denote the imperative is, we may suppose, the earliest imperative form (see above p. 246); Sollberger's conjecture that the volitive subjunctive originally had three prefixes representing the first, second, and third persons: ga -, u_2 -, and ha -, and that therefore the second person of the imperative (u_2 -) has developed from the volitive of the second person, must probably remain a, perhaps well founded, but unprovable supposition.

Class III. 1. Sollberger reads E-GA (after a vowel: GA-) $e\dot{g}a$ -, i.e. $enga$ -, and claims that he can show its emphatic sense, but only two examples are known from pre-Sargonic times. Delitzsch⁴ only knows one $inga$ - as an eme-SAL parallel form to the prefix $imma$ - (see p. 254). Poebel's morphological reflections on the latter were mentioned above on p. 256, without our acceptance. Poebel himself⁵ regards $-nga$ - as an infix often with a prefixed $-i$ $-nga$ -, whereas this is not termed an eme-SAL word; the origin of the understanding of prefix i - is explained by Poebel as derived from e -. Sollberger's notion of the prefix is supported by R. Jesti⁶ and Falkenstein⁷ but as yet we are unable to indicate more exactly its shade of meaning.

Class III. 2: al -. This prefix is only found twice in the whole of the Sumerian Lagash period. In post-Sumerian times its function seems to be to denote the durative (stative). But as Falkenstein⁸ has pointed out, "die nicht stativische Bedeutung der Verbalform" appears clearly from one of the Old Sumerian passages.⁹

Sollberger's learned work broadly speaking passes over the composite prefixes in silence; of the shades of meaning which must be supposed to be expressed through them we are as yet unable to form

¹ Cf. e. g. Sollberger, *ibid.* pp. 193-95.

² *Kl. sum. Sprachl.* (1914), p. 66.

³ Sollberger, *ibid.* p. 196.

⁴ *Kl. sum. Sprachl.* (1914), p. 69.

⁵ *Grundzüge d. sum. Gr.* (1923), pp. 148, 196.

⁶ *Le verbe sumérien* II (1946), pp. 299-300.

⁷ *Gram. d. Spr. Gudeas* I (1949), p. 218³.

⁸ *AOF* XIV (1942), p. 335²³.

⁹ Cf. also Sollberger, *Le système verbal* ... (1952), p. 176.

any opinion. In the evaluation of Sollberger's ingenious analyses of textual passages and of the conclusions he draws from them, I must regard his Class I. 1. as the essential factor in his conception of the prefixes. As already stated, in several particulars he is influenced by Poebel's constructive morphology; but in other respects his work, by its demonstrative dissociation from Poebel's Indo-European Sumerian verbal system, must up to the present date be said to be the most important supplement to Deimel's views as yet published. In their main lines these are the first genuine Sumerian interpretations of the earliest texts though they are characterised by a certain monomania in the dimensional conception of the prefixes. By calling attention to the prefixes *Nul-* and *a-* Sollberger has carried us further than Deimel, and in his masterly analysis of the prefixes *mu-* and *e-*,¹ which in his opinion can only be understood by being contrasted or parallelised, Sollberger has made one more contribution to our understanding. Here Deimel established two absolutely opposed dimensional values, Latin *ad* (*mu-*) and *ex* (*e-*); Sollberger's values are also absolutely opposed, but they indicate whether the object of the verb belonged to "la classe animée" or "la classe inanimée."

A great amount of work already lies behind Sumeriology from the period of Sir Henry Rawlinson's pronouncements in 1855 to our time; text editions, Brünnow-Deimel's collections of signs and a series of important grammatical investigations, for which I am especially indebted to Deimel and Sollberger, even though I have perhaps learned just as much about Sumerian by constantly opposing Poebel's views. But much still remains to be done before we can say that we have approximately got to the bottom of the Sumerian language. The immense number of shades of meaning which we know from primitive languages, where the verbal core so to speak attracts all the sentence elements in an agglutinated chain, so that the verbal complex, at any rate with verbs of motion, is equivalent to the whole sentence, the whole pronouncement or narrative in itself, this wealth we must try to understand for Sumerian too. And by greater grammatical understanding our insight into the semasiology will probably grow. To this very day we can only approximately understand texts of a complicated content and line of thought, as e.g. the religious texts.

¹ *Ibid.* pp. 120-40.

CHAPTER VI

EXCAVATIONS IN MESOPOTAMIA 1842-1954

A. Historical and Methodological.

§ 1. A general view of the results of a century's excavations in Mesopotamia gives an overwhelming impression of the extraordinary wealth of knowledge of three ancient civilisations which through them has been imparted to the learned world as well as the general public. But the history of the excavations is also a grandiose epic in the beginning of which we meet with grand and undaunted personalities who defying incredible trouble and toil and climatic difficulties appear before us as the heroic figures of Assyriology. In the last songs of the epic these giants have been replaced by excavating staffs, who cover the highest expert knowledge in any imaginable field within archaeology, architecture, epigraphy, etc. The excavating technique has been refined and improved with every decade, and the investigators find support in their work by the internal-combustion engine, electric light, modern methods of photography, and many other things. Besides, the excavating staffs in the finding-place possess literary aids in selected libraries, technical laboratories, and often modern comfort.

The inspiration which lent wings to the adventurous courage in the beginning of the forties of the last century cannot be referred back to a single source; but we may mention the fact that biblical history and the Mesopotamian civilisations have from a certain date been inextricably bound up with each other. Furthermore the increasing interest in learned circles, counting from the latter part of the 18th century, partly in the heaps of ruins in Persepolis and the cuneiform inscriptions found there, the resemblance of which to Mesopotamian epigraphy had been ascertained, partly the growing interest in antiquities among museum officials, especially stimulated by the existence of the two comparatively recently founded collections in the British Museum (1753, opened 1759) and the Louvre (1791). But special

stress should be laid on the inspiration radiating from the writings of the two great pioneers of Assyriology, J. de Beauchamp and C. J. Rieh.

We have previously (see Ch. II) mentioned their epoch-making reports and the fact that both of them on the site of the ruins of Babylon by means of paid native workmen made excavations on a small scale in the years 1784 and 1811, respectively, Beauchamp employing three, Rieh ten workmen, while Pietro della Valle in 1616 as the first excavator in Mesopotamia unaided and himself alone dug at several places at Bâbil with a pickaxe. Beauchamp's report from 1790, which two years later was also available in English and German translations,¹ in 1797² inspired the East India Company to start the collection of Mesopotamian antiquities through their Resident at Baghdad, and in Beauchamp's native country his collections became the nucleus of the famous Assyro-Babylonian collections of the Louvre.

But the profoundest and greatest effects were those of Rieh's investigations. His elucidation of the topography of Babylon³ introduced a new era, since, as distinct from Beauchamp, he, as the first of all, made a systematic survey of the grandiose site of ruins and collected finds, a number of which bore inscriptions. His reports on his visits to the site of ruins of Babylon in 1811 and 1817 were published in 1813⁴ and 1818; but even though in these reports he presented almost virgin material and enormously stimulated the interest in the ancient Mesopotamian civilisations, it was his studies on the topography of Nineveh which came to exercise the greatest effect. Previously J. Cartwright, Carsten Niebuhr, and J. M. Kinneir⁵ had made significant contributions to the investigation of the area of ruins in the immediate neighbourhood of Mosul, but the yield of Rieh's four months' stay at Mosul from 31.10.1820 on inspired and formed the whole basis of Botta and Layard's excavations.

Rieh's topographical survey of the Ninevite area of ruins, which by Felix Jones in 1852⁶ was characterised as being "as correct as the most diligent enthusiast can desire" and therefore was an invaluable

¹ See above p. 50³.

² See above p. 66.

³ See above p. 51.

⁴ New Impressions, see p. 51².

⁵ See above pp. 42-43, 46-47.

⁶ See above p. 47.

aid to the excavators of the forties, as well as the report on his studies of the mound of Nimrūd in March 1821, because of his sudden death of cholera at Shīrāz on 5.10.1821 was not published until 1836¹ by his widow. While the interest in ancient Babylon created in 1813 and 1818 through Rich's above-mentioned topographical studies on it had gradually faded and only in Robert Mignan's not very successful excavations at Qasr in 1827² assisted by 30 paid workmen found a successor, Rich's posthumous work of 1836 had an enormous influence because of Jules Mohl (1800–76) and Austen Henry Layard's extraordinary personalities.

The former was born at Stuttgart and as a young man studied oriental languages in Paris under Silvestre de Sacy and Rémusat. While he was a professor at Tübingen 1826–33, his interests besides on Iranian studies centered on Chinese. When the French government entrusted him with the edition of Firdausi's *Shahname* (published 1838–66), he went to France in 1834, where he was naturalised.

Having studied Rich's book from 1836 he felt convinced that Rich had found the ancient Nineveh and that a rich archaeological harvest expected excavators there. On a visit to London, after he had been appointed secretary to the Société asiatique, Paris, in 1840, he was further inspired by personal inspection in the British Museum of Rich's collections, which had been acquired by the Museum on 3.5.1825. It was by virtue of Mohl's influence and activity that the French government created a vice-consulate at Mosul, to which was appointed the Italian physician and scientist Paul Émile Botta, born at Turin (1802–70), who, after being in Egyptian service since 1830, in 1833–42 had held the office as French consul at Alexandria. During his stay in Egypt Botta had become acquainted with the French archaeological activities there, and Mohl before Botta's departure to Mosul instructed Botta and in broad outline planned the scope of his activities as excavator of ancient Nineveh. According to Mohl Rich had to perfection examined the mounds so that it was quite unnecessary for any follower of his to repeat this work. Now the essential thing was to dig beneath the surface of these mounds. Botta arrived at Mosul on 25.5.1842.

Austen Henry Layard (1817–94) was born in Paris of a Huguenot

¹ See above p. 83.

² See above p. 53.

family which had emigrated to England in the 17th century.¹ The reading in his youth of "The Arabian Nights" and Rich's accounts of discovery at Babylon and Nineveh became decisive of his whole career. And as the study of law in England was far from conforming to his disposition, he set out in 1839 in order to seek a career in Ceylon, travelling by land in the company of E. L. Mitford. The two travellers reached Hamadân together, where they parted on 8.8.1840, Mitford to go to India, Layard stimulated by the sight of the Bihistûn inscription to return to the region around Mosul, whose ruins had entirely captivated him. On the journey to Hamadân the two friends had arrived at Mosul on 10.4.1840; Layard on his journey from Mosul to Baghdad passed the ruins of Nimrûd, which Rich had visited in March 1821, like Rich sailing down the Tigris in a small *kelek*. The sight of Nimrûd's ruined ziggurat with its conical peak burnt itself into Layard's mind, while at the same time Rich's spirit moved upon the face of the waters of the Tigris and inspired Layard to perform the colossal work of his manhood, the excavation of ancient Nineveh.

Thus the late publication in 1836 of Rich's topographical studies on ancient Nineveh was the direct cause of the Mesopotamian excavations starting in the region around Mosul. The first spadefuls of earth were dug in December 1842 on the mound of Kuyunjik under the leadership of Botta, but after glorious and to this very day unique results from the excavations at Khorsabad, Nimrûd, and Kuyunjik, partly the war against Turkey, partly the great demands made by the Crimean War (1853-56) on the finances of France and England in 1855 put an absolute stop to all activities in the region of Mosul, and apart from the repeated returns of the British Museum expeditions to Kuyunjik, the last time in 1927-32, Botta and Layard's Mosul area has since then been considered an archaeologically concluded field of excavation. Still, the British School of Archaeology in Iraq has since March 1949 obtained fine results during recurrent excavations in Nimrûd in the months of spring.

¹ It is interesting to note that Rich was born in France (Dijon, Burgundy, or the South of France). He is stated to have been born in 1786 (Constance M. Alexander, *Baghdad in Bygone Days* (1928), p. 1); Mary Rich, his widow, however, states that his birthday was 28.3.1787 (*Narrative of a Residence in Koordistan . . .* (1836)), and we have followed her statement. He was a natural son of a certain Colonel James Cockburn, his mother being Freuch (see L. H. Vincent, *Revue biblique* 53 (1946), p. 404⁷). He spent most of his boyhood in Bristol.

The centre of gravity of the Mesopotamian excavations was moved to southern Babylonia in the period after Botta and Layard's activities. Only three pioneers are to be mentioned here, who first of all visited and described the huge areas of ruins which later on were to play a dominant part in the history of excavations in Mesopotamia: J. Baillie Fraser, John Ross, and William F. Ainsworth. These three have inspired investigators of the *tulûl* of interior and southern Mesopotamia just as Rich previously aroused an interest in Babylon and especially Nineveh. During the period from 24.12.1834 to 22.1.1835 Fraser in company with Dr. John Ross of the Baghdad Residency visited Warka, Senkereh, Jôkha, Muqayyar, and Tell Şifr (publ. 1840),¹ while Ainsworth during the period from 16.3 to 28.10.1836 as the surgeon and geologist of the so-called British Euphrates Expedition observed the same *tulûl* (publ. 1841)² as Fraser and Ross. Furthermore, John Ross as well as Ainsworth visited Ka'at Sharkât, the former in 1836 on his way to Hatrah (publ. 1839),³ the latter twice, viz. in 1838 and on 20.4.1840 in the company of Christian Rassam, Mitford, and Layard (publ. 1841).⁴

§ 2. Innumerable and great were the difficulties which the first excavators came up against in Mesopotamia. The first of these to be mentioned is the relations to the government of the country and to its population. Good relations to both besides permission to make excavations were a main condition of obtaining any results. Above in Chapter II § 2 we have in broad outline traced how many times Mesopotamia was changing masters during the period from the fall of Babylon in 538 B.C. to the assumption of power by the Persian Sassanids in A.D. 226 after the Arsacids. The Persian rule was overthrown by the caliph Omar at the head of the Islamic armies and since then half of the population of ancient Mesopotamia has been Mohammedans. Politically both Mongols, Persians, and Turks ruled over the mainly Arab population of the country for a shorter or longer period.

A schematic survey counting from 636 looks like this:

Omayyads	636-750
Abbasids	750-1258

¹ See above p. 54¹.

² See above p. 54².

³ See above p. 54³.

⁴ See above p. 54⁴.

Mongols (Hulagu, Timur-Leng)	1258-1509
Persians (Safawids)	1509-1534
Turks (Ottomans)	1534-1621
Persians	1621-1638
Turks	1638-30.10.1918
British Mandate (Iraq)	28.6.1919 (10.8.1920) - 3.10.1932
The Kingdom of Iraq (Faisal, King of the mandate of Iraq	23.8.1921; † 1933) 3.10.1932 ff.

During the period after 1638, in the second Turkish period, Mesopotamia was divided into several vilayets (provinces) or pashaliks, the most important of which were Baghdad, Mosul, Basrah, and Kirkuk. A vilayet (pashalik) was ruled by a governor-general (wâli) with the title of pasha appointed by the sultan in Constantinople. From 1723 to 1817 the Baghdad pashalik was absolutely dominant, comprising an area almost equal to the present Iraq, for which reason a British Agency was established at Baghdad in 1755, subject to the Governor of the East India Company at Bombay. From 1765 the British Agency at Baghdad was governed by an Englishman. During the period from 1817 to 1831 the Baghdad pashalik lost its dominant position so that other Mesopotamian vilayets were coordinated with it in respect to area and influence. During the period after 1831 we find constant fluctuations as regards the administrative areas of the various Mesopotamian vilayets, a fact which is partly due to the desire for power of the individual pashas and partly is connected with a new division of the Turkish realm into 32 vilayets, 25 of them in Asia. Thus the Baghdad vilayet during the period immediately after 1831 included Aleppo and Mosul, but in 1842 the pasha of Mosul (Muhammed Keritli Oglu) was independent of Baghdad, whereas in 1877 Mosul was subject to the vilayet of Aleppo, but then Aleppo was independent of the vilayet of Baghdad in contrast to 1831, etc. This is not the place to discuss the mutual relationship between the Mesopotamian vilayets, but it should be noted that their history and domains often were dependent on individual prominent pashas, to whom the distance from the sultan's central government in Constantinople was so great that they took the liberty of playing autocrats at some distant place in the Middle East.

Botta and Layard learnt this to their cost when, as the first of all, they started large-scale excavations in the region of Mosul. Indeed,

the excavators had to negotiate with the local authorities. Far down into the 19th century the Turks in themselves were indifferent to the fate of pre-Islamic monuments; still, the local authorities had very often opposed and obstructed the activities of the excavators, because of religious prejudice, personal spite, or simple malice. I think I give a loyal report when characterising the pasha of Mosul in 1842, Muhammed Keritli Oglu, as an unpleasant individual and a spiteful ruffian.

On 20.3.1843 Botta started his comprehensive excavations at Khor-sabad and during the following months opened up a hundred chambers, halls, and corridors, the walls of which were almost all lined with bas-reliefs representing gods, kings, battles, sieges, and religious ceremonies; many monumental inscriptions were found between the bas-reliefs, and the principal doorways were flanked by human-headed winged bulls or lions carved from gigantic monolithic slabs. But in his great joy at this unique palace find, during his toil and moil under the blazing summer sun and the dangerous climate to which he almost fell a victim, Botta was incessantly annoyed by interferences with his work on the part of the local authorities. The French government soon responded, by sending off the painter Eugène Napoléon Flandin partly in order to copy reliefs, partly in order, when passing through Constantinople, to get a *faramân* for Botta, i. e. an edict or order issued by the grand vizier in the name of the sultan, which was to secure Botta from any interference with his work by the local government. But a number of delays and the Porte's slow response caused that Flandin did not arrive at Mosul until May 1844, and during the winter Botta had been obliged to close the excavations as he had suffered every imaginable obstruction.

At the end of October 1845 Layard arrived at Mosul with a *faramân* from Constantinople; on 8.11.1845 he and H. J. Ross reached Nimrûd without having informed the pasha, Muhammed Keritli Oglu, of their purpose and intention. Digging first with 6, later with 11 Arab workmen, Layard in a few days through first soundings found two buildings, afterwards known as the Northwest and the Southwest Palaces, a chamber lined with slabs of alabaster decorated with cuneiform inscriptions, and a conical mound at the northwest corner of the platform. Layard now found it advisable to be communicative to the pasha, who was extremely interested in possible findings of gold. Then

Layard continued digging with 30 men directed by a foreman and in the Southwest Palace made the unique discovery of Ashurnasirpal's bas-reliefs on the 28.11; but the same day his excavations were stopped at the order of the pasha: Layard's excavations were disturbing some Moslem graves on the summit of the Nimrūd mound and must therefore be discontinued. Layard immediately (4.12.1845) informed the British Ambassador in Constantinople, Sir Stratford Canning, about what had happened and emphasised the necessity for a supplementary *faramân* to protect him from interference in the future so that the unique finds might be excavated and probably be supplemented by numerous others. Then he made up his mind temporarily to re-bury his sculptures and return to Baghdad.

In the beginning of January 1846 Muhammed Keritli Oglu was replaced by a just and enlightened official Ismâ'il Pasha, who permitted Layard without any *faramân* to continue his excavations, but the *qâdi* of Mosul, who was Layard's worst enemy, made a disturbance among Layard's workmen by telling them that Layard's inscriptions were subversive of the principles of Islam. Not until the middle of February could Layard resume the excavations with Hormuzd Rassam, a Chaldaean Christian, as overseer and general agent and with 30 Nestorians ("Assyrians") as the nucleus of the paid workmen. Among new finds should be mentioned a perfectly preserved winged bull colossus, which, however, caused a violent reaction among Layard's Arab workmen, who bore the stamp of religious prejudice, so that a great agitation arose in Mosul, and the new pasha had to veto any further discoveries. Layard, who had not yet received any *faramân* from Constantinople had to obey the pasha's orders. Only after Layard had again requested Canning to get a *faramân* and in the summer of 1846 had made a mountain journey over Hatrah to Sinjar for recuperation, he received a generous and strongly worded *faramân* which protected him in the future from any kind of official interference. In October-November 1846 Layard then resumed his excavations, but as in the case of Botta, it had lasted for almost a year, in which much time was lost, to get the *faramân* which could protect them from the petty spite and the resistance of the local administration.

When the Trustees of the British Museum later resumed excavations on Nimrūd and Kuyunjik under the leadership of George Smith (1873-74, 1875-76), H. Rassam (1878-80), and E. A. Wallis Budge (1888-89,

1890-91), the same affair was repeated. During the period of 2.3.-8.4. 1873 G. Smith waited in vain for being able to start the excavations, as his *faramán* had not arrived, and when at length he received it, it was so full of rules, regulations, stipulations, and threats of penalties and fines for non-compliance that obviously all obstacles were put in his way instead of the opposite. And during his second stay in Mesopotamia he waited for his *faramán* for six months, viz. from October 1875 to March 1876 and did not succeed in starting at all because robbers from the Arab tribes infested the Mosul region. Death overtook him at Aleppo on 19.8.1876.

H. Rassam as well had to wait long before he could set to work at Kuyunjik; early in 1877 the Trustees sent him to Constantinople for a *faramán*, but he had to return to England without having accomplished his object after waiting for three months and a half. But in April 1877 Sir Henry Layard was appointed British Ambassador to the Porte and in a couple of months he succeeded in obtaining a *faramán* for Rassam, his faithful helper from the glorious excavations 1846-51. Rassam then in June 1877 went to Mosul to reopen the excavations at Kuyunjik; but when he arrived there he was unable to begin work, as his *faramán* had not yet arrived. The excavations could not be resumed until the beginning of January 1878. When at length Rassam had started it was of great assistance to him that just Layard was the ambassador of the British government to the Porte, and he succeeded in getting a new *faramán* for Rassam from 1878 on, which permitted him to carry on excavations at more than one site at the same time (the vilayets of Baghdad, Aleppo, and Van). But Rassam's *faramán* was limited in time, and when the Porte in 1882 refused to renew his excavating permit, he had to stop work in the middle of most profitable excavations at Abû Ḥabbah, the ancient Sippar; on 20.12.1882 Rassam was back in England for good and all.

To this very day such a "permit" has been necessary everywhere in the Middle East and Near East where excavators supported by rich funds want to make excavations in autonomous states; and in the Orient everything takes time. Thus Claude F. A. Schaeffer, who because of the war had to discontinue his excavations at Ras Shanira (Ugarit) in the autumn of 1939, tells that the Syrian government to begin with after 1945 had closed the country to foreign archaeologists, but that in the period from 1947-49 he was permitted to undertake

some soundings and studies among the ruins. "Then, in the autumn of 1950, a formal permit was delivered to me and the excavation could be resumed on its pre-war scale."¹

Above (p. 273) it was mentioned how Layard's excavations at Nimrūd were twice prohibited by two different pashas because of their religious prejudices. Later G. Smith, from 12.3. to 4.4.1874 was even accused of disturbance of Moslem graves and of blasphemy on the part of his dragoman. To this very day the mound Nabî Yûnus, which covers part of the city area of ancient Nineveh, is still unexcavated, as the Mohammedans consider it a sanctuary which is supposed to contain the grave of the prophet Jonah, and besides, a small village covers its surface. About the end of 1820 Rich visited the subterranean *sirdābs* under Nabî Yûnus and from findings of the natives in the area of ruins obtained the so-called Bellino-Sennacherib Cylinder, first published by Grotefend in 1850.² Botta's first investigations in the Mosul regions were made at the very Nabî Yûnus inspired by Rich's mention of antiquities discovered beneath the houses, but a storm of opposition on the part of the guardians of the Moslem shrine made him shift his activities to Kuyunjik. Layard made some soundings beneath the houses—I think it was soon after 27.2.1851—, found inscriptions of Adad-nirāri III, Sennacherib, and Esarhaddon and established the existence of the palace of Esarhaddon beneath the village of Nabî Yûnus, but when religious opposition asserted itself and the excavations on Kuyunjik already gave him too much work to do, his results were but few. And on 28.4.1851 Layard left the excavations on Kuyunjik for good and all.

When his successor as leader of the excavations in the Mosul region, Hormuzd Rassam, about the end of 1852 arrived at Mosul, he had the rare experience of seeing that the Turks themselves with permission from and under the leadership of the pasha Hilmi had started small-scale excavations in the village on Nabî Yûnus because of the finding of the head of a winged bull in the *sirdāb* of a house. The actual digging was carried out by prisoners from the local prison hampered by heavy chains and was continued for some months. The results were few in number. Besides the original bull-colossus, which could not be removed, an inscribed marble tablet may be mentioned, the so-

¹ *Ill. London News* 27.3.1954, p. 488.

² See above p. 87.

called Sennacherib Nabî Yûnus inscription.¹ Rassam, who had hoped that he could continue Layard's investigations of 1851, offered to continue the excavations, but an absolute ban on his activities was issued. But Rassam did not lose patience, and during his last excavating campaign in Mesopotamia (January 1878–July 1882) he spent to begin with much of his time in the Nabî Yûnus village in order to win the confidence of the inhabitants, at high prices bought numerous dilapidated houses or hovels, and after 2.4.1879 without actually demolishing the buildings began to excavate in their *sirdâbs* and connect his shafts with tunnels. But this reached the ears of the religious leaders at Mosul and after their appeal to the Minister of Public Instruction in Constantinople an official ban on Rassam's work was issued. This was in May 1879, and since then no excavations have been made on Nabî Yûnus.

Above (p. 272) it has been stressed that the Turkish central administration as well as the local administration was completely indifferent to the fate of pre-Islamic antiquities and monuments. That the population in general takes the same view if only the contents of Islamic faith is not violated is added as a matter of form. Therefore the expeditions to begin with did not come up against any difficulties when they removed the finds excavated and had them shipped to European museums. But in the course of time came a turn of the tide in the attitude of the local authorities. George Smith, who did not seem to have grasped the use of *bağshîsh*, repeatedly had difficulties. The pasha of Mosul considered Smith as an *antikat*-dealer and thought that he was entitled to receive percentages on the deal, and from January to March 1874 Smith had to give up a considerable number of tablets to the pasha, as the latter for want of obtaining a handsome *bağshîsh* from Smith, demanded all duplicates of tablets on behalf of the Imperial Ottoman Museum. Presumably the pasha had expected Smith to buy back the tablets from him. The statement about the museum in Constantinople presumably was mere fiction; but G. Smith in his obstinacy and want of understanding of the Mesopotamian native mind did not buy the tablets, which were lost to research. They never reached Constantinople.

Simple desire for worldly goods was behind the petty spite to which Smith was exposed; but when Hamdî Bey became Director of the

¹ See C. Bezold, *Bab.-ass. Lit.* (1886), p. 98.

Imperial Ottoman Museum, things took a different turn. It is true that Budge in 1888 was permitted to continue the British Museum's search for tablets on Kuyunjik, but only provided that he in return would present the Imperial Ottoman Museum with archaeological publications and casts of Assyrian reliefs to the equivalent value. Budge of course accepted these conditions. Here for the first time we see the excavators faced with the concept of *quid pro quo* to the governmental authorities. Hamdi Bey had succeeded in having appointed a kind of local Turkish inspector of antiquities at Baghdad, partly in order to check, if possible, to prevent the natives' illicit digging, partly in order to prevent the re-exporting by Europeans of certain antiquities from Turkish territory without control. Especially at the end of the nineties Hamdi Bey tried, for the benefit of the Constantinople Museum, to carry through active regulations as regards Mesopotamian antiquities. But an actual accomplishment of his programme was never effected, and it should be emphasised that Hamdi Bey by arrangement let the Trustees have the about 800 cuneiform tablets which L. W. King and R. C. Campbell Thompson succeeded in recovering during their excavations at Kuyunjik 3.3.1903–11.2.1905.

The British mandate of Iraq, with King Faisal I on the throne (23.8.1921), had its establishment confirmed at the Peace of Sèvres on 10.8.1920 and existed until 3.10.1932, when Iraq became an independent sovereign state. During the mandate period a strong national feeling and desire for independence grew up, which especially under the influence of Gertrude Bell's extraordinary personality included the glorious heyday of the country under the Assyrians and the Babylonians in the national consciousness of the educated part of the population, a result of which was the *Antikal* Act of 1924.

The travels of Gertrude Bell (1868–12.7.1926) in 1909 and the account of them published in 1911¹, from Aleppo to Jerablus on the Euphrates and further on along this river to Anah and Hit and then due south to Al 'Ujaidir, from where she went along the Tigris by way of Baghdad and Diarbekir to Konya in Asia Minor, show her sensitive understanding of the people with whom she was associated and gave an impression of the first stirrings of the later well-known "Arab awakening". She understood its national consciousness and its political nationalism, with which she felt the greatest sympathy. When

¹ *Amurath to Amurath* (1911).

General Stanley Maude on the 11.3.1917 with a British-Indian army had entered Baghdad and in his famous speech declared before the people that Great Britain wished to support "the aspirations of their race," Gertrude Bell was in the management of the Arab Bureau, then from October 1917 as unofficial, later official Oriental Secretary to the first British High Commissioner of Iraq, Sir Percy Cox, actively attached to the new-established Arab state, and at the Cairo Conference in 1921 contributed to the election of Faisal I on 23.8.1921 to ascend its throne. As Oriental Secretary it was amongst other things incumbent on her to constitute an antiquities service, and she started building up a new national collection, which in 1926 was carried into effect as the Iraqi Museum at Baghdad, while Gertrude Bell herself from 1923 until her death in 1926 was temporarily appointed joint Honorary Director of the Directorate-General of Antiquities and of the New National Collection.

Under consideration for the new Director of Antiquities was in 1923 amongst other things the conclusion of Koldewey's estate in Babylon, where the excavations were discontinued on 10.3.1917. A decision as to the results of H. R. Hall's excavations in 1919 at Tell Al 'Ubaid had been made during Gertrude Bell's secretaryship. Considering that Koldewey had started in March 1899, it was only reasonable that in 1926 536 crates from the excavations of Babylon were sent to Berlin, where they arrived in 1927, while only the contents of 93 crates were reserved for the Iraqi Museum. Hall's finds, on the other hand, which originated from April-May 1919, thus a short time before the establishment of the mandate of Iraq on 28.6.1919 were considered to belong to another period, the result being an equal division between the British Museum and Gertrude Bell's New National Collection. This gave a shock to European-American museum and excavator circles. The *Antikal* Act, which received royal confirmation in 1924, was still more strongly worded.

In this law the new national state of Iraq with systematic consistency carried into effect ideas which about the end of the nineties vaguely occurred to Hamdi Bey for the promotion of the Constantinople Museum, as mentioned above, without their ever being realised. Only stressing those sections in the Act that are of fundamental interest for the excavating expeditions, it should be stated that §§ 16 and 24 both attach importance to having the illicit native digging abolished by prohibiting

any form of excavation "without a permit", even on soil owned by the excavator himself. The severe penalties for breaches of the law (3-6 months' imprisonment or fines of £ 65-130) are clearly aimed at the natives. The Europeans have known the necessity of having a *faramân* from the times of Botta and Layard. Application for an excavation licence is to be directed to the Office of Works, and in § 17 it is emphasised that the applicant must be a scientific society or institution or an individual person whose scientific competence has been substantiated. Furthermore § 19 lays down that the management on the site is to be with an archaeologist who is provided with all the necessary equipment for photographing, surveying, drawing, etc., whereas the presence of a linguistic expert, an Assyrian philologist, is not required. In the same section two months' excavation a year on the site as minimum performance is required, and it is laid down that the Director-General of Antiquities may keep an inspector on the site on the expedition's account. This last passage denotes that the Iraqi government through a controller supervises the progress of the excavations. The importance of this last provision stands out particularly clearly after the reading of § 22.

In this section it is required that when the excavations have been finished, an adequate scientific publication of the results of the excavations is to be submitted before the lapse of two years, unless the Director-General of Antiquities prolongs the term. Later it has been demanded that the progress and results of any excavation season are to be submitted to the Department of Antiquities in a perhaps type-written or printed publication. These provisions are of great importance for research, that it may be kept fairly well-informed of the results obtained through the excavations. But § 22 also lays down that these publications should include a list stating in whose hands the finds are found after the conclusion of the excavations. This implies a division, as the Director-General of Antiquities selects the finds which are considered "necessary" in order that the Iraqi Museum can be "scientifically adequate". Then the excavator—or rather the licensee—will have handed over such objects as will mean a satisfactory remuneration for his efforts; as far as possible this should be a representative selection which illustrates the complete result of the campaign. Finally it appears from § 22 that the finds which must be considered unique are always reserved for the Iraqi Museum.

The fate of Hall's finds from Tell Al 'Ubaid mentioned above invited reservation on the part of European-American museum and university foundations as regards the financing of large excavating expeditions. In 1922 and 1923 the large-scale excavations in Ur and Kish under Anglo-American and English auspices, respectively, were started. The *Antikal* Act in 1924 was a great blow to the leaders of these excavations, but since there as well as in the case of other works of excavation it was mainly a question of uncovering remains of houses and especially temples, the idea of division was not at once of immediate importance. It became so when the Royal Cemetery at Ur with its rich finds was excavated during the periods of 1926-30 and 1931-32 as well as when the Early Dynastic sculptures were discovered at Tell Asmar in 1933-34, to mention only a couple of conspicuous instances. Seton Lloyd voices a general impression of the foreign excavators' feelings, when writing: "'Division Day' coming at the end of a hard season's work will always, under the present régime constitute a somewhat strained and unpleasant occasion, and doubtless more than one excavator has retired to bed with the feeling that he has encountered his Waterloo."¹ At any rate it is a fact that after 1932, when the mandate ended, both the British Museum and the Louvre according to a joint decision of August 1933 ceased making excavations in Iraq: Woolley in 1934 went to Tell 'Aṣṣhānah (Alalah) near Antiochia in Syria, Parrot left Larsa for Mari in April 1933, Watelin in 1933 discontinued his work in Kish and went to the Easter Islands, where he died on 6.6.1934, M. E. L. Mallowan left Arpachiyah in April 1933 in order to work outside Iraq at Chagar Bazar and Tell Brak on the upper course of the Ḥabur. But it should be mentioned that the Americans remained at Tepe Gawra, Nuzu, and in the Diyala basin and the Germans at Warka until some months before the outbreak of World War II.

The § 22 of the *Antikal* Act has made the Iraqi Museum into one of the finest in the world, especially unique as regards Sumerian art, as in 1932 eleven expeditions were operating in Iraq simultaneously. The general departure in the years 1933-34 mentioned above and World War II have of course left their traces, but at the same time the Department of Antiquities has displayed great excavating activities since 1939 and obtained most important results, not least during World War II, when elsewhere in the world only guns and fragmen-

¹ *Mesopotamia* . . . (1936), p. 188.

tation bombs were speaking. The Iraqi Department of Antiquities after Gertrude Bell's early death was organised by eminent European research-workers during the period of 1929-34, and the Iraqi officials who afterwards have held the very comprehensive office from 1934 to 1.1.1949 have been given great support by European researchers in their capacity of archaeological advisers to the Department:

Gertrude Bell	1923-12.7.1926	Honorary Director
R. S. Cooke	1926-5.1.1929	- -
Sidney Smith	6.1.1929-20.3.1931	Director
(Technical adviser: Lionel Smith)		
Julius Jordan	21.3.1931-18.10.1934	-
(Adviser: Lionel Smith)		
Sa'î al Haşri	18.10.1934-14.6.1941	-
(Advisers: J. Jordan 1934-39, Seton Lloyd 1939-41)		
H. E. Yusif Ghanima	23.11.1941-24.6.1944	Director-General
(Adviser: Seton Lloyd 1941-44)		
H. E. Naji al Aşil	24.7.1944-	-
(Adviser: Seton Lloyd 1944-1.1.1949).		

§ 3. On the whole the excavators were on good terms with the population of Mesopotamia, which mainly consisted of Moslem Arabs. It was from these that the labour force was taken, often the subordinate leaders of groups of workers, but still, when all is said and done, the Arab population perhaps put more obstacles in the way of the excavating expeditions than the local authorities and even the slow and unsympathetic issuing of *faramâns* by the Porte. Especially religious fanaticism, thefts of antiques, use of finds of any kinds for private building, and direct attacks by tribes of robbers often made it impossible to establish historical connexions as a result of the work of excavation, or at best only impeded and interrupted research for a prolonged period. The "hunting of bricks", which consists in the local population using Assyro-Babylonian remains of buildings for their own building activities, presumably dates back to antiquity and is different from the "hunting of *antikats*", i. e. the theft of finds, which like religious fanaticism and robbery with assault is direct inspired by the stay of the foreign excavators in the country and their activities. The "hunting of bricks" is a phenomenon which is thousands of

years old. G. A. Olivier,¹ who in 1793 visited the Hillah region and observed the activities of the natives, says, "Là, des Arabes sont occupés, depuis plus de douze siècles, à fouiller la terre et retirer les briques, dont ils ont bâti en grande partie Cufa, Bagdad . . . Hellé, et presque toutes les villes qui se trouvent dans ces contrées." Ten years or thereabouts previously J. de Beauchamp² had made similar observations in the Hillah area, having seen there that the Arabs made "excavations" to procure building bricks: "faire les fouilles pour en tirer les briques." In the same place Rich³ in 1811 and 1817 watched gangs of Arabs from Hillah excavating Babylonian baked bricks for building purposes, and in March 1821 on Nimrûd he found that the Arabs had cut into stones Assyrian monuments and used them for the erection of their hovels. Rich himself benefited by the "hunting of bricks" by the Arabs, as he without difficulty obtained from them good specimens of brick-inscriptions. In this way he became the founder of the *antikat* trade on a small scale at Mosul, to begin with to the advantage of European research-workers, later, as we shall see, to the great detriment of Assyriology.

All these things were misfortunes which had happened before more or less systematic excavations started in 1842, but also after that time great damage has been done. As mentioned above (p. 273), Layard's excavations were discontinued in the spring of 1846 at the pasha's command. Two winged figures found by Layard at the Nergal gate in the northwest wall as well as one of the first bull-colossi which had to be left behind on the road to Mosul, amongst other things because the trolley conveying it broke down, do not exist any more. The Arabs burnt them into gypsum, which is used for their own building activities. The "lime-burner" is a designation for the Arab feared by all excavators. The two former figures might in 1905 still be seen in situ,⁴ and one of them escaped the lime-burner and was refound in 1941. It is unknown to us when the other two figures were destroyed, but H. de Genouillac, when after the death of E. de Sarzec (1901) in 1929 he reopened the excavations at Telloh, found that Sarzec's "palace"

¹ See above p. 50.

² See above p. 51.

³ See above pp. 51, 47-48.

⁴ R. C. Thompson and R. W. Hutchinson, *A Century of Exploration at Nineveh* (1929), p. 33.

in the meantime had served as a quarry for building bricks for the neighbouring sheikhs and had almost disappeared. And after the German excavators in 1917 had left Babylon, almost every brick that had been left of Etemenanki's structure was removed by Hillah's master builders so that now only a small lake overgrown by rushes in a deep depression is to be seen.

The Mesopotamian climate, with heavy showers, sand storms, and fiery heat, is a hard master and hastily wipes out the uncovered, unprotected remains of buildings which the excavators at some time leave behind, if they do not take special measures to protect excavated remains, as e. g. it has been attempted at Tell Abû Harnial (1945, 1947-49). In 1951 I have myself ascertained how little was left to be observed e. g. of the agelong excavations at Assur (1903-14) and Babylon (1899-1917). But the "hunting of bricks" further contributes to wiping out the traces of the excavators' pains, and it is but a poor consolation that this takes place everywhere where the relics of antiquity are within reach of the natives. Thomas Herbert,¹ who in 1626-27 visited Persepolis tells that the monuments of Persepolis were fast approaching annihilation owing to the natives, and it applies to Troy that "there is ancient testimony that the Homeric site (Hissarlik II or VII a) was pillaged for stones in the sixth century when Sigeion was built on the shore."² From Europe I quote in the following Sir Mortimer Wheeler³: that according to Matthew Paris (Matthaeus Parisiensis † 1259) an abbot in the 11th century at the Romano-British site of Verolamium (Verulamium: Saint Albans, Hertfordshire) "turned over the soil to a considerable depth that he might find masonry structures," which he "reserved for the fabric of his church."

Like the lime-burner the "hunting of *antikats*" is the sworn enemy of the excavators, it being identical with theft. The above-mentioned Thomas Herbert complains of the thefts at Persepolis and much later Rich in 1820 had a corresponding experience: "Many parts [of Persepolis] have been defaced by the passion for possessing curiosities. This rage has induced some even to chipp off bits of inscriptions! One has endeavoured to chisel off a very fine head, which was well preserved, and, not succeeding, he has, apparently in wrath, thrown

¹ See above p. 57.

² See J. L. Myres, *Iraq* VI (1939), p. 74.

³ *Archaeology from the Earth* (1954), p. 78.

his mallet against the head and smashed it."¹ In Mesopotamia it was the Europeans who in their ardent search for antiques called the natives' attention to the value of these for them, and, as mentioned above, Rich organised a kind of *antikat* trade. Since then theft flourishes in connexion with the work of the expeditions of excavation. Details are given e. g. by W. K. Loftus² on the basis of his experiences at Warka (1850), where the desirable ornamental objects of the grave-goods had a fascination to the Arabs, but the greatest damage was presumably made through the thefts of cuneiform tablets. The Arabs soon understood that these by the European research-workers were considered as perhaps the very most valuable finds, and the character of the Nippur excavations during the first seasons clearly confirmed this. But already previously the natives had started "excavations", searching for antiques and tablets, e. g. at Abû Habbah (Sippar) and Dêr so that G. Smith from Baghdad dealers in 1876 might acquire 2000 tablets from the former finding-place, Budge in 1890-91 from the same source about 9500 tablets from Dêr. To Rassam G. Smith's acquirement was a hint, and for 18-19 months, from January 1881 to July 1882 he made his famous Sippar excavations, which brought ten thousands of cuneiform tablets to light. Perhaps the damage was greatest at Telloh, as after de Sarzec's departure (May 1900) the natives opened up the tablet chambers after which 35-40,000 tablets found their way to the Baghdad dealers and thus reached the open market.³ Larger antiquities such as diorite statues suffered the same fate. And at Jôkha (Unma) and Drehem (some six miles southeast of Nippur) the Arabs had for years secretly been excavating for cuneiform tablets so that the large number of Ur III texts from these city areas reached the museums through the open market without having been excavated systematically by expert excavators. In the ruin area of Senkereh (Larsa), which had only been visited by W. K. Loftus (1854) the natives' clandestine excavations had taken place for a prolonged period, and a good number of the stolen things had been sold e. g. to the Louvre, but in 1931 so many Arab tribes were plundering the old Larsa that the newly established Iraqi Department of Antiquities had to drive them away by means of the aeroplanes of the Royal Air Force.

¹ *Narrative of a Residence in Koordistan* ... II (1836), p. 222.

² *Travels and Researches in Chaldaea and Susiana* ... (1857).

³ See further Budge, *Rise and Progress of Assyriology* (1925), pp. 200 ff.

The excavators met with a third difficulty as regards the natives. The ruin areas were often more or less temporarily inhabited, and the settlement was considered as a no man's land, the ownership of which was in the hands of those living there at the time. Thus Beauchamp from his visit to the Hillah region about 1784 tells that the natives who then had settled on Qasr "ne voyent jamais volontiers les Européens fouiller les terrains qu'ils occupent."¹ Still, already Beauchamp found a way out of this difficulty: "il faudrait payer la cupidité des Musulmans,"² and since then all his successors have realised that current coin is capable of solving many a problem arising.

Not that of religious fanaticism, however. The stand of the local authorities against the excavators was of course based on the contents of Islamic faith, but mostly they were direct influenced by the primitive reactions of the natives, which to begin with was in the nature of taking the law into their own hands. Rich tells that in November 1820 he, on Kuyunjik, was too late to see a certain "immense block of stone, on which were sculptured the figures of men and animals", because it had been destroyed by religious fanatics, and above (p. 273) the difficulties are mentioned which Layard came up against at the end of November 1845 as well as in January and February 1846 besides all the futile attempts that have been made to include Nabî Yûnus in the excavation area of Nineveh (above, pp. 275-76). Well-known are also the difficulties which Loftus met with during the transport from Warka to the Euphrates in 1850 of the Parthian sarcophagi; for the respect for the peace of the grave is ingrained in the Moslems. Rassam's extraordinary caution is admirable when in January 1878 he excavated at Balâwât, the inhabitants of which were Shebeks, members of one of the many non-Islamic minorities in the Mosul area, well-known for their religious susceptibility. With the greatest tact he selected the most respected religious notables of the village to supervise his proceedings. These were complicated by the fact that the whole top surface of the mound was covered by a graveyard. Rassam went to work in a part which was full of graves and in a few hours was rewarded by the finding of Shalmaneser III's famous bronze gates.

The excavators met with a last difficulty from the vagrant Arab

¹ See above p. 59.

² See above p. 59.

tribes. It is true that the Turkish vilayets in Mesopotamia were placed under the authority of the governor and his officials, but often this authority reached no farther than the town gate. Outside this large Arab tribes lived their vagrant and independent life. The predominant tribe, to this very day, between the Hatrah and the Tigris, but roaming about right down to the Hillah area, was the large Shammar tribe, while the most important South Babylonian Arab tribe in the area between Baghdad and Telloh was the Muntafiq tribe. Other South Babylonian tribes with which the excavators got into touch were the Zobaid, Afaq, Tuwaiba, and Ma'dân tribes. It applies to all these that from the start of the excavations in 1842 to about the turn of the century, they must be considered uncontrolled by the vilayet authorities, and that poverty and savagery were characteristic of the minor tribes outside the Shammar and Muntafiq groups, even though some, such as e. g. the Ma'dâns were good-natured. The ability to negotiate and the patience of the excavators as well as the great demands upon their purse were put to a severe test; but no Mesopotamian excavator has suffered death at the hand of native murderers as F. Éd. Schulz in the Kurdish regions around Van (1829) or J. L. Starkey, who on the 10.1.1938 was murdered in South Palestine by Arab banditti.

When Rich with his young wife in 1807 went by water up the Tigris from Basrah to Baghdad in order to take over the post as English Resident, the sheikh of the Muntafiq gave them a dignified and impressive reception; but later on this powerful tribe gave much trouble to Rich when they had the pasha of the Baghdad vilayet murdered. And in 1877 one of the reasons why Ernest de Sarzec ventured to start excavations at Telloh without a *faramân* was that South Babylonia at that time was practically independent under the Muntafiq sheikh Nâsir Pasha, the founder of the town Nâsiriyah and later governor of the Basrah vilayet.—When Layard in 1841 was on his return journey to Baghdad after his adventurous stay with the Bakhtiari tribes in Persian Khuzistan, he was north of Hillah attacked by Shammar tribes, who believed that he was a Turk, wearing a tarboosh, and only by chance saved his life. Layard, however, through this episode obtained a result of great importance for his future excavations, as the supreme sheikh of the Shammar, the Sofuk, as he is still called, promised him safety through all future when he stayed within Shammar territory, and during the journey for the sake of his health in the summer of 1846¹ Layard

¹ See above p. 273.

spent a long period in the Hatrah-Sinjar area as the guest of the Shammar tribe. This powerful tribe had been opposed to the malicious pasha of Mosul, Muhammed Keritli Oglu, and therefore took up a sceptical attitude towards the new governor Ismâ'il Pasha.

Attacks by the Arab tribes on the transports or camps of the expeditions might cause irreparable losses. When Layard on 28.4.1851 left Mosul the artist T. S. Bell had been left in temporary charge at Kuyunjik, but he was drowned in the river Gomel near the Bavian sculptures, which he was drawing. Christian Rassam then took charge of the work being continued at Kuyunjik and Nimrûd. The result at Kuyunjik was a number of tablets daily dug out of a chamber built entirely of bricks which Rassam together with a number of bas-reliefs and other antiques had loaded upon a raft in fifteen cases for transport from Kuyunjik to Baghdad. But near ẖal'at Sharḳât the raft was attacked by Arab tribes, who were only interested in the wood, iron, and other materials of the raft, and therefore after having made prisoners of the guards and raftmen threw the sculptured slabs into the river. Layard¹ has given a description of their pictorial contents, but the slabs themselves have been lost for good and all.—Perhaps the attack of the Arab tribes on the most important Khorsabad transport on 21.5.1855 at ẖurnah was the cause of an irreparable loss to Assyriology; see further § 5.

During the time after February 1889, when J. P. Peters started the first American excavations in Nippur, many difficulties were caused to him by the fickle and unreliable Afaq tribes who made the district unsafe. Two of the main tribes, the Hamza and the Behahtha laid claim to the mounds Peters had occupied and insisted on furnishing workmen for his excavations; fortunately for the expedition they were at war with each other. But a disaster took place on Thursday the 18.4.1889, when the Afaq Arabs made a ruinous attack on the camp of the expedition. Disaster and chaos was the final result of Peters' first season at Nippur: the whole camp laid in ashes, robbery of fire arms and money and of horses which had not perished in the flames took place.²

On the background of the Nippur disaster it is worth while stressing Sir Leonard Woolley's statement from 1934;³ it carries weight because

¹ *Discoveries in the Ruins of Nineveh and Babylon* ... (1853), p. 441.

² H. V. Hilprecht, *The Excavations in Assyria and Mesopotamia* (1904), p. 317.

³ *Ur Excavations II* (1934), p. 11.

for a number of years, 1922-34, he directed the extremely successful excavations at Ur: "For the immunity of the site credit is largely due to Sheikh Munshid ibn Hubaiyib, within whose tribal area Ur lies. By an arrangement made in 1922 and approved by the Iraq Government he assumed responsibility for the safety of the Expedition when it was in the field and for safeguarding of the house and site during the summer months; in return for a fixed payment made to him he supplies such guards as he may consider necessary and backs them with the moral authority of himself as tribal chief. . . . That the treasures from the tomb of Shub-ad, from the "King's Grave" . . . could be kept in the Expedition house in the desert without the protection of a steel safe or even of a locked door, while the whole country-side was agog with the scarcely exaggerated report that our rooms were piled high with gold, is another testimonial to Sheikh Munshid's integrity and to the hold he has over his people. The Arabs of southern Iraq enjoy a bad reputation for dishonesty, but we at least have little cause to complain of them."

§ 4. The difficulties which arose by mutual relations between the French and the English excavation expeditions during the first decade in the Mosul region as well as in 1879 at Tellah is to be mentioned here. National ambition naturally during the period after 1842 found much support in public grants, in return for which results were expected which might be displayed in the large museums of the two countries. It was unfortunate that the national competition should speed up the work, which proceeded by leaps and bounds and was characterised by a restlessness which the staff of a modern excavation expedition certainly would reject. On the other hand the performance was stimulated through the competition, and the extraordinary wealth of finds which characterises the first decade of the Mesopotamian excavations, and which I think may be considered unparalleled through a century's almost incessant excavations, should be kept in mind, while at the same time a great many things may from the point of view of modern excavation technique fill us with a holy terror.

It is very fine to keep in mind the mutual relations of the two giants. Botta arrived at Mosul on 25.5.1842 and after futile attempts on Nabî Yûnus and in December 1842 on Kuyunjik, he started from 20.3.1843 to October 1844 the famous French excavations at Khorsabad. Layard

thus did not start his excavations until Botta had left Mesopotamia for ever, viz. at Nimrūd on 9.11.1845, on Kuyunjik in the late spring of 1846. But when Layard in May 1842 passed through Mosul on his way to Constantinople and from Botta learnt about the latter's plans for his excavations and that somebody else supported by his government should realise the dreams he himself had been dreaming since 1840 (see above p. 269), as a genuine gentleman he did not feel any envy, but formed a friendship with Botta, with whom he entered upon a correspondence. And when Botta was despondent at his small success at Nabī Yūnus and Kuyunjik or was tormented by the dangerous climate of Mesopotamia, it was Layard who in his letters urged him to persevere; and Layard¹ many years later remembered Botta's unique helpfulness towards him in these beautiful and model words: "My friend M. Botta had continued his excavations amongst the Assyrian ruins, and had commenced those great discoveries at Khorsabad with which his name will be ever connected, and which have given him lasting fame. With a generosity and liberality rare among discoverers, he had allowed me to see his letters to his official superiors in France, describing the remains that he had uncovered, and accompanied by copies of cuneiform inscriptions and by drawings of the bas-reliefs found in the buried palace of Sargon. These letters were sent to the care of M. de Cadavène, a highly accomplished French gentleman who was then at the head of the French Post-Office at Constantinople, and who, after allowing me to see them, forwarded them to their destination in France. I was, at that time, in constant correspondence with M. Botta, who kept me fully informed of his discoveries." And when Layard in 1847 on his home journey after ending his first expedition to Nimrūd (and Kuyunjik) in December met with Botta in Paris, the latter, with all his generosity, contrived that Layard was invited to address the Académie des Inscriptions et Belles-Lettres on the subject of his discoveries.

During the period from October 1844 to the middle of January 1846 Rouet acted as French consul after Botta's departure. In his letters dated 19.10, 3.11, and 17.11.1845² is the first mention of the great rock-cut sculpture found at Maltaï and the rock-cut inscriptions of Sennacherib at Bavian, about ten miles from Khorsabad. Layard was

¹ *Autobiography and Letters* ... II (1903), p. 107 f.

² See *J.As.* 4. sér., tome VII (1846), pp. 280 ff. and Layard, *Discoveries* (1853), p. 207*.

not on very good terms with Rouet nor with the latter's successor Guillois, even though any knowledge of details has escaped us as Layard mentions these with intentional obscurity. Still it may be ascertained that Layard and Guillois in late spring 1846 both made excavations on Kuyunjik. There Botta as the first had made trial excavations in December 1842, and the French consul therefore considered Kuyunjik as French property. Layard, on his part, referred to his *faramân* of October 1845, empowering him to dig anywhere and everywhere in the vilayet of Mosul: "Not having yet examined the great mound of Kouyunjik . . . I determined to open trenches in it. . . . The only opposition I received was from the French Consul, who claimed the ruins as French property. The claim not being recognised, he also dug into the mound, but in another direction. We both continued our researches for about a month without much success."¹ Layard then returned to the Nimrûd excavations, which in October 1846 were finally resumed (see above p. 273).

Kuyunjik was far from being French property, as thought by Guillois, on the contrary presenting an intricate problem, as the summit of the mound was privately owned. Those *faramâns* which had been obtained by Botta and Layard, the first times in May 1844 and October 1845, respectively, and which were later renewed by the Porte, only applied to excavations without hindrances in all lands which were Crown property, for which reason the owner of the Kuyunjik summit must necessarily be satisfied through compensations. This whole circumstance occasioned a fine episode in the relation between English and French, in which Rawlinson and Place played the principal parts. During a stay in Constantinople in 1849 Layard by a strange coincidence met with the owner of the summit of Kuyunjik at a time when the latter was in severe economic difficulties. Layard helped him out of his difficulties and in return was given a concession in connexion with his property at Kuyunjik. Victor Place (1818-75) remembered this when on 12.1.1852 he arrived at Mosul as French consul. Well-known as an eminent architect it was intended that, subordinate to the French Expédition scientifique et artistique de Mésopotamie et de Médie led by Fulgence Fresnel, he was to continue and finish Botta's Khorsabad excavations. The English Resident in Baghdad since 1843, H. C. Rawlinson, on his return to this town at the end of 1851 after his journey

¹ *Ninereh and its Remains* . . . I¹ (1849), pp. 131, 132.

to Europe, had been chosen to conduct a kind of directorate of the English excavations in Mesopotamia. Place therefore went to see Rawlinson and asked for permission to make further soundings at Kuyunjik, and the latter generously granted Place a large area at the northern end of the mound, and the line of demarcation which Rawlinson carefully worked out should have prevented any open dispute.

Place and Rawlinson's mutual attitude was expressive of a fine respect for the two countries' justified interests during the excavations in the Mosul region; but the national competition was soon to flare up. There were several causes. After Botta's departure in October 1844 Layard seems to have made several soundings at Khorsabad without any apparent success, but as a number of reliefs had remained in the trenches, the British Museum from there acquired several specimens, and Rawlinson from Guillois for the same Museum bought two winged genii and two androcephalous bulls from Khorsabad. Place therefore opened negotiations and acquired as compensation six sculptures from Nimrūd for the Louvre. The other and main cause was Hormuzd Rassam (1826-1910), a Christian Chaldaean, who since the middle of February 1846 had been active as Layard's first assistant and after his departure from Mesopotamia in April 1851 continued Layard's excavations. Rassam's work, with all its good and bad qualities, is well-known by all Assyriologists, and it cannot be denied that the British Museum is highly indebted to the always keen and indefatigable searcher for Mesopotamian antiques. Rassam, who both at Nimrūd, on Kuyunjik, and at Ƙal'at Sharƙāt continued Layard's work, in the two last-mentioned places felt annoyed by Place's activities (which were also, although in vain, directed towards Nimrūd), did not recognise Rawlinson's line of demarcation on Kuyunjik, and on Ƙal'at Sharƙāt in the beginning of 1853 had incessant conflicts with Place, who was excavating there simultaneously with Rassam. The booty of the latter was only Tiglathpileser I's prism, but no figures or bas-reliefs hoped for, while the dispute over the right to excavate the mound was continued in the most embittered way. Perhaps it was the ascertainment of the poor yield at Ƙal'at Sharƙāt and at Nimrūd and the fact that Place's agents had in vain tried to secure a foothold in the latter place which especially caused Rassam's well-known coup on 20.12.1853 on the part of Kuyunjik which Rawlinson had reserved for Place and which made the British Museum the owner of Ashurbanipal's famous

lion-hunt sculptures and the most important part of the same Assyrian king's library. Place, who fell a victim to this – to put it mildly – clandestine proceeding, behaved handsomely, visited the new palace excavations and congratulated the finder, but then withdrew from excavations on Kuyunjik.

In 1879 we again find Rassam's indefatigable ardour. He had from 1854 to 1876 served the British Government in the best way at Aden and in Abyssinia; but by the great influence of the Assyriologist A. H. Sayce the British Museum in 1876–77 planned a new expedition to Kuyunjik in order to continue George Smith's work there, and Rassam on 7.1.1878 started the work as leader of this expedition. When Ernest de Sarzec, French vice-consul at Basrah in March 1877 started his excavations at Telloh assisted by the architect H. de Sevelinges, he had not in advance applied for a *faramân* from Constantinople, partly for fear that Rassam's attention should be called to the existence of the mound, partly because of the independent status of southern Babylonia at the time under the Muntafiq sheikh. de Sarzec had obtained his knowledge about Telloh from J. Asfar, known as a dealer in antiquities. During the periods from March to June 1877 and from February to June 1878 de Sarzec discovered diorite figures and a great quantity of inscribed material which he successfully transported to France and which he disposed of to the Louvre for the sum of 130,000 francs. While de Sarzec was in France, Rassam found time to investigate Telloh, which did not come under the areas in which his *faramân* permitted him to dig. But as de Sarzec had excavated there without a *faramân*, he thought that he might do so as well. Rassam gathered workmen, during the period from 24.2 to 13.3.1879 set to work on the largest of the mounds and in a few hours found the remains of a temple; furthermore two inscribed gate-sockets, a number of unbaked tablets and inscribed memorial cones and many inscribed mace-heads. But after three days' digging in February 1879 Rassam had partly to discontinue his excavations, as his workmen got into strife, partly among themselves, partly with neighbouring tribes. Rassam hoped that through the aid of Layard, who from April 1877 was British Ambassador to the Porte in Constantinople, he might obtain a *faramân*, but de Sarzec had already provided one for himself and from January 1880 could continue his pioneer Sumerian findings undisturbed by the interference and molestation of Rassam's gangs.

§ 5. Economic difficulties on the part of the first French and English excavators should also be mentioned. They occur in all decades of the past century of excavations in Mesopotamia, thus the Oriental Institute of the University of Chicago (founded in 1919) only for some time was supported by large-scale contributions from foundations, just as the two world wars affected the Government grants as well as private assignments to the great excavations in the Near and Middle East. A fortnight after Botta's excavations at Khorsabad had been started, he wrote in a letter, dated on 8.4.1843, to J. Mohl: "Je continue à faire déblayer et je le fais avec d'autant plus d'intérêt, que je crois être le premier qui ait découvert des sculptures que l'on puisse, avec quelque apparence, rapporter à l'époque où Ninive était florissante."¹ Mohl and the Académie des Inscriptions et Belles-Lettres pleaded the cause of Botta, the Louvre, and science, and in May 1843 the French Government granted 3000 francs. Other grants may be dated at 5.10 and 12.10 of the same year – a total of 140,000 francs was contributed to the Khorsabad excavations, and an amount three times as high was granted by the Government towards the publication of the *Monument de Ninive* (1849–50), besides the fee for a special artist Eugène Flandin, who in the autumn of 1843 was sent to Botta's assistance. While thus the French Government to begin with, well backed up by the Académie des Inscriptions et Belles-Lettres and the Louvre Museum, greatly aided Botta and Place and through them gave the greatest support to the study of general history and the culture of antiquity, the financial burdens in connexion with the Crimean War seem to have put a definite stop to further French excavations in Mesopotamia for a long period.

Considering that the value of the franc at Botta's time was 10 d., the total amount received by Layard during the period from 1845 to 1851, £ 6450, was about £ 620 greater than the grants for the Khorsabad excavations, which covered a similar period as those of Nimrūd and Kuyunjik. But the first contribution to Layard was due to a private person, the English Ambassador to the Porte, Sir Stratford Canning, later Lord Stratford de Redcliffe. Layard arrived at Constantinople in 1842 from Mosul, as mentioned above (p. 269), after having interrupted his journey to Ceylon together with Mitford in Hamadân, 8.8.1840. There he was during the years 1842–45 attached to the British Ambassador as an unofficial agent. Botta's findings at Khorsabad

¹ *J.As.* 4. sér., tome II (1843), p. 70.

further stimulated Layard's fervent wish to examine the mounds of Nimrūd and Kuyunjik.

We have previously mentioned Layard's predilection for Nimrūd; this was shared by Christian Rassam (see p. 270), the British vice-consul at Mosul, brother to Hormuzd Rassam, and the Rev. G. P. Badger. Christian Rassam in 1844 had indirectly suggested to the Trustees of the British Museum that he should be permitted to do for the British Government at Nimrūd what Botta had done for the French at Khorsabad. The Trustees did not accept his suggestion and in 1845 decided to take no further steps. Badger had examined Nimrūd in the beginning of 1844 and found bricks and slabs with cuneiform inscriptions and on 26.10.1844 had sent Canning a report¹ on this which influenced the latter so much that he decided privately to provide the necessary funds for Layard. At the end of September 1845 Canning's and Layard's plans had matured so much that the latter in a letter from Pisa dated 30.9.1845 could stipulate the expenditure connected with preliminary excavations at Nimrūd. Two months' trial excavation, at which 3-5 piastres per diem as the pay of workmen was the main expenditure, as Layard hoped that he could avoid the necessity of buying the villagers' land and houses, was estimated to be done at £ 150, to which amount Canning assented.

In the spring of 1846 Canning realised that the importance of the antiquies found at Nimrūd were of such a character that it must be up to the Government to intervene. The Trustees of the British Museum were convinced of Layard's success, and negotiated with the Treasury, which granted £ 2000 for further prosecution of the excavations. When in the first quarter of 1848 according to report from H. J. Ross, who after 24.6.1847, when Layard together with Hormuzd Rassam went to Constantinople and London, together with Christian Rassam had continued the excavations, on a small scale, the funds were exhausted, a new grant of £ 500 was received, and before the beginning of 1849 the Treasury had contributed a total of £ 3300 for the Nimrūd excavations. After his arrival in England in 1847 Layard began preparing his report on the excavations, assisted by Samuel Birch (1813-85), and: "As a reward for my various services and for my discoveries, I was appointed an unpaid attaché of Her Majesty's Embassy at Constantinople."²

¹ Printed in G. P. Badger, *The Nestorians and their Rituals* I (1852), pp. 87-92.

² *Early Adventures in Persia, Susiana, and Babylonia* (1887), p. 426.

The change came when his *Nineveh and its Remains* was published in 1848–49. Layard tells in a letter to Mitford: "Nearly 8,000 copies were sold in the year – a new edition is in the press, and Murray anticipates a continual steady demand for the book, which will place it side by side with *Mrs. Rundell's Cookery*, and make it property."¹ Layard's book from 1848 is one of the "great" books of the 19th century by virtue of its contents as well as its style, which is extraordinarily vivid and makes it good reading for the learned and the unlearned. "His books became best-sellers and made Assyriology a household word before Greek archaeology had been invented or even Olympia dug or Troy found. . . . Without the simplest training or experience, almost unaided, without scientific equipment, without comforts or even medical assistance and with very little money, he dug, recorded and accurately described and drew beautifully without pause, right through the fiercest trial of an Iraqi summer."² Layard was allowed only a few months in Constantinople, from the spring to 28.8.1849. Public opinion exerted pressure; the Treasury granted £ 3000 spread over two years, and Layard from the Trustees received an urgent request to lead a second expedition to Nineveh. This lasted from 12.10.1849 to 28.4.1851, and Layard on this last excavation of his was assisted by Hormuzd Rassam, who again was aided by F. Cooper, a competent artist, and Dr. Sandwith, a physician. After Layard's return to England in 1851 a brilliant career within foreign as well as home politics was started for this highly gifted personality, who during the period 1877–80 ended his career by discharging the high office which his great patron in his youth, Sir Stratford Canning, had held, that of being Her Majesty's Ambassador to the Porte in Constantinople.

From the end of 1852 to March 1854 Rassam continued the excavations on Kuyunjik and Nimrūd, and in July 1853 he received £ 1500 granted to the Trustees of the British Museum by the Treasury; but when in the spring of 1854 this amount of money gave out and in the meantime (20.12.1853) the invaluable findings of the Lion-hunt and Ashurbanipal's Library *per nefas* had been made, the Assyrian Exploration Fund lent a helping hand. This had been founded in July 1853 on the initiative of the Prince Consort, Lord John Russell, and British publishers under the impression of Layard's brilliant success and had

¹ *Autobiography and Letters* II (1903), p. 191.

² R. D. Barnett, *AJ* XXVIII (1948), p. 190.

delegated W. F. Loftus and the draftsman W. Boucher to go to southern Mesopotamia, where they had been making excavations at Warka and Senkereh after January 1854. Rawlinson, as leader of all the excavations of the British Museum in Mesopotamia, in the years 1854 and 1855 had delegated J. E. Taylor, British vice-consul at Basrah, to excavate Muqayyar and Eridu in southern Babylonia. When Rassam in March 1854 because of scarcity of money had to go home from Mosul, the Assyrian Exploration Fund sent Loftus and Boucher, who had not had great results to show from the south, to Kuyunjik at the expense of the Fund in order to continue Rassam's work. From the Prussian king the Fund had just received £ 500 for a collection of duplicate sculptures from the English excavations and thus was flush of money. However, when the Treasury in July 1854 again granted £ 1500 for the continuation of the Kuyunjik and Nimrûd excavations, the Assyrian Exploration Fund entered into partnership with Rawlinson and the British Museum, also financially, and was dissolved on 20.2.1855.

As quoted above, Layard was "without scientific equipment" and, at any rate until the middle of 1846, when Hormuzd Rassam joined him, unaided. Therefore his chief expenses were the wages to the native workmen, as stressed in the letter to Canning mentioned above (p. 294). The wages during the period from 1845 to 1851 were as follows: "The diggers, who were exposed to very severe labor, and even to considerable risk, received from two piastres and a half to three piastres (from 5d. to 6d.) a-day; those who filled the baskets from two piastres to two and a half; and the general workmen from one and a half to two piastres. The earth, when removed, was sifted by boys, who earned about one piastre for their day's labor."¹ Of course the wage rates have changed in the course of time; in the twenties of the present century, when amongst others Woolley's expedition dug at Ur, the wages per man per day was about 1 rupee, i.e. 1s. 4d.

The number of native workmen employed varied from place to place according to the task and the character of the aim. The available funds set the problem how large in extent the excavation area might be, one or more results before the start of the work being intended as the aim planned. The number of workmen depends on

¹ A. H. Layard, *Discoveries in the Ruins of Nineveh and Babylon* ... (1853), p. 101.

the character of the task set; on this it can in general only be stated that the leader of the expedition must take it for granted that workmen on historic excavations must be numbered in the hundreds, but in the tens on a prehistoric site. Within the former type of site the number depends on the question whether it is a trial excavation (trial trenches, soundings), a town area, a single building (palace, temple, private dwelling), or a burial ground. The workmen of whom we have been thinking in what precedes are those employed at the excavation work proper; the number of those employed at the transport of finds was especially in the times before the internal-combustion engine was taken into use, extremely large, but in our day it has been greatly reduced thanks to the mechanical means of transport.

The Mesopotamian *tulûl* which have been formed through millennia where in antiquity larger or smaller Sumerian or Assyro-Babylonian town areas were situated, are often of a very impressive size: Babylon 850 ha, Kuyunjik 750 ha, Warka 450 ha, Khorsabad 300 ha (the palace: 10 ha; cf. the palace at Mari: $2\frac{1}{2}$ ha), Nippur 180 ha; smaller areas are Nimrûd 79, Surghûl 66, Ur 55, Assur 53, Eridu 20, Tell Billah 15 ha. In 1857 Felix Jones¹ calculated how long theoretically it would take to excavate the $14\frac{1}{2}$ million tons of Kuyunjik: if 1000 men a day excavated 330 tons, the result would be about 120,000 tons a year or about 120 years in all. From such a supposition it is realised that the large town areas of course are excavated in the way that only single parts, especially palaces or parts of palaces and temples, have been uncovered, as well as parts of burial grounds; that trial trenches in such town areas also have given the excavators supplementary insight has been of importance for obtaining a kind of survey of the general character of the town plan as well as its possible fortification.

The reports of the expeditions are very reserved in respect of mention of the number of native workmen employed, especially those from the twentieth century, which in all other fields are characteristic by innumerable details. Through direct inquiries and correspondence I have supplemented the information of the publications. The result is far from complete, but still gives some lines, as the large areas are seen to have employed three-figure numbers while the smaller historic and the prehistoric sites show two-figure numbers:

¹ See above p. 47^a.

- Khorsabad (1843-44): about 300.
 Nimrûd (1845-46): 6, later 11, finally 31; (1846-47): 130-300; (1949 ff.): 200.
 Ka'at Sharkât (1853): 100.
 Kuyunjik (1874, G. Smith): 600; (1878-80, Rassam¹): 500, who were also employed at the excavations at Nimrûd; (1890-91, Budge): 300; (1903-05): 120-300; (1927-28): 100.
 Nippur (1889): 32, later 100-250; (1890): 200-400; (1948 ff.): about 200; (1953): 120.
 Abû Habbah (1894, V. Scheil): 50.
 Babylon [Beauchamp 1784: 3, Rich 1811: 10, Mignan 1827: 30]; 1899-1917: 200-250.
 Assur (1903-14): 150-200.
 Tulûl Al 'Aqir (1913-14): 120.
 Ur (1922-34): 150-180.
 Jemdet Nasr (1925-26, Langdon): 12; (1928, Watelin): 180.
 Kish (1928-29): 200.
 Warka [Loftus 1850: 10]; (1928-39): 350.
 Tell Al 'Ubaid (1937): 7.
 Tell 'Uqair (1940-41): 80-97.
 'Aqar Kûf (1942-45): 65-150.
 Tell Hassuna (1943, 1944): 67-94.
 Tell Abû Harnal (1945-49): 35-95.
 Eridu (1946-49): 80-100.
 Jarmo (1950-51): 40.
 Shanidar (1951): 38.

For comparison the following non-Mesopotamian excavation areas may be mentioned: Tell Halaf (1929): 200; the 'Amuq area (1933-37): 1000 distributed among Tell Judaïdah, Chatal, Jobba Hüyük, and Tayinat; Chagar Bazar (1936): 150; Ras Shamra (1953, full-scale excavation): 300.

It cannot be formulated generally how many foremen to direct the larger or smaller number of native workmen were required for the excavation work, as their share will depend on the character of the work. But I have seen proofs that a scientific staff of five and a really good foreman could handle about 40-75 workmen on a prehistoric site. The foremen, who in Mesopotamia are always natives, are of the

¹ *Asshur and the Land of Nimrod* (1897), pp. 207-208.

greatest value for the accomplishment of the work as well as for the establishment of a staff of competent, non-thievish, and diligent workmen; I need only quote Sir Leonard Woolley:¹ "During the whole time, too, Hamoudi—more formally known as Mohammed ibn Sheikh Ibrahim, my foreman at Carehemish in pre-War days, was foreman in charge of the cemetery work; of his skill in excavation, his energy, and his tact in managing men too much could not be said. He was assisted by his sons Yahia, Ibrahim, and later Alawi, all of them admirable foremen. Yahia also acted as photographer, and nearly all the field photographs reproduced in this volume were taken by him."

The difficulties of transport for many reasons were extreme, almost insuperable during the period of the first excavation expeditions. The only passable routes in Mesopotamia in those days were the Euphrates and the Tigris, which were the main traffic routes of the country, and even though the factors of danger of proceeding there were many, as we shall see below, such as conditions of currents, storms, and the heavy cargoes, it was along these routes that the invaluable and often irreplaceable finds were taken to Basrah, from where the journey continued to the European museums, often via Bombay on the way to the British Museum, as large ships were only available there. But the route down to the Tigris passes over 14 miles of "arable land" from Khorsabad, the longest distance from one of the river routes of Mesopotamia known during the 112 years of the whole excavation period. Nimrûd, Kuyunjik, and Ka'at Sharkât are situated much closer to the Tigris, though we should not underrate the difficulties of transport there any more than in the case of Babylon, Ur, and Warka on the Euphrates. Among large areas only Nippur and Eridu are as disadvantageously situated as Khorsabad, but excavations in these two areas were made at much later times. Khorsabad is even the very first large area to be excavated, although only in part.

Next, it should be kept in mind that the largest and hence the heaviest finds which were ever excavated in Mesopotamia were just found at Khorsabad, Nimrûd, and Kuyunjik. Altogether it must be emphasised that in most large excavation areas after 1855, as a result of the work of the expeditions, we mainly have to do with such finds as cuneiform tablets, grave goods, and minor finds of any kind (e.g.

¹ *Ur Excavations II* (1934), p. 8.

pottery, beads, seals), statuettes, etc., besides, of course, the remains of uncovered blocks of buildings remaining in situ. For this very reason the transports of finds during the years 1843-55, when mechanical aids were negligible, are of a really marvellous character, and it is with quiet wonderment and profound reverence that one contemplates the colossal finds from Khorsabad, Nimrûd, and Kuyunjik in Paris and London.

A Khorsabad bull weighs about 40 tons, as the Assyrian Expedition (The Oriental Institute, Chicago) under the leadership of E. Chiera found to their cost when in 1929 they tried to transport a bull fragment from the restarted Khorsabad excavations: a five-ton truck broke down under its weight.¹ After that one thinks with respect of Botta and understands how incredibly difficult his transports were. With aids of the very most primitive kind he had constantly to improvise and devise means for the transport of the huge sculptures. He had to construct a waggon with wheels almost a yard broad and with home-forged axles, he had to employ 500-600 men to pull the waggon, and still could not always prevent it sticking in the mud. A bull and two large figures had to be left behind half-way on the road between Khorsabad and Mosul. The extraordinarily large number of transport workmen, which is the only one recorded from the Mesopotamian excavations, is due to the time, the distance from Mosul, and every lack of any real transport means even considering the time. From Mosul Botta's finds were taken without mishap by *kelek* to Baghdad, where they remained for a year in the charge of the French consul-general, after which they were transferred to Basrah, where in May 1846 the French naval vessel "Le Cormoran" loaded the sculptures, which safely reached Le Havre in December 1846; they arrived at Paris in February 1847 and on May 1st were erected and exhibited in the Louvre.

Layard was in a much better position than Botta, who lacked even the simplest implements of transport, since Layard was in possession of a quantity of useful tackle originally belonging to the so-called British Euphrates Expedition (16.3.-28.10.1836): a cart with iron wheels, a cast-iron crane, a screw-jack, and blocks. It was interesting for Layard that in Sennacherib's palace on Kuyunjik he found Assyrian sculpture reliefs showing the transport in the days of that king of the

¹ See J. Breasted, *The Oriental Institute* (1933), p. 368.

colossal winged bulls. The fact that he learnt from this appears from his remark: "When moving the winged bulls and lions now in the British Museum from the ruins to the banks of the Tigris, I used almost the same means"¹ and in a special chapter (XIII) in *Nineveh and its Remains* (1848-49) he tells in detail about the moving and removal of the lion and the bull from Room Y in the Northwest Palace at Kuyunjik. In May 1846, when Botta's finds were shipped at Basrah, Rawlinson attempted to hasten the despatch of Layard's treasures by sending Captain Felix Jones and his Tigris steamer "Nitocris" right up to Nimrûd to fetch them there; but Jones was stopped by the first rapids above Tikrit, and Botta's finds were the first to reach Europe; but then Botta was also the first to start the great excavations. Layard had to float his finds by *kelek* borne by inflated skin-bladders to Basrah, with a short stay at Baghdad. Layard's shipments to Europe took place in July 1846 (to Canning at Constantinople), 25.12.1846, 29.3.1847, 22.4.1847, and 22.6.1847, the four last-mentioned ones to the British Museum. The transport down the Tigris proceeded without mishap; from Basrah the first shipment was taken to Bombay, from where the ship "Grecian" during the period from 5.1. to the end of May 1847 brought it to London. Layard in the preface (p. XII) to *Nineveh and its Remains* says that the cases of this shipment containing the small objects were opened at Bombay and their contents exhibited to the public, and that "several of the most valuable specimens are missing; and the whole collection was so carelessly repacked that it has sustained very material injury."—The other shipments reached Chatham, Kent, together by the same route in October 1848, after leaving Bombay on 12.4. in H.M. Royal Navy Brig "Jumma". A violent gale which the ship met with on 23.4. forced it, dismasted, to put in at Trincommalee in Ceylon to refit. One dares not think of what might have happened.

But on 21.5.1855 the calamity happened. No Assyriologist will ever forget the disaster at Kurnah. We shall hardly ever get to the bottom of the causes of the disaster. Sometimes an attack from malicious Arab tribes is pointed out as the prelude to the confusion that arose, with subsequent shipwreck; sometimes ignorance, carelessness, and mismanagement on the part of the French officials are adduced, as they were not, like the English, accustomed to floating on the Tigris

¹ *Discoveries in the Ruins of Nineveh and Babylon* ... (1853), p. 114.

and were without special insight into the functions of a *kelek*. Near the mouth of the Shatt el-Arab at Kurnah, where the Tigris and the Euphrates join, a large native boat and two rafts were wrecked, an irreparable loss thus befalling the new Assyriology. We have no exact information as to the contents of the wrecked vessels, we only know that the greater part of Place's material from Khorsabad was lost and now only exists in print thanks to the careful drawings and descriptions due to Félix Thomas, who after 14.3.1853 had been attached to the Khorsabad excavations. In the 41 cases which amongst other things contained the results of Place's excavations were also the results of the excavations of Mission Fulgence Fresnel (Expédition scientifique et artistique de Mésopotamie et de Médie); furthermore 68 cases were lost in which were found antiques and slabs from Ashurbanipal's palace at Kuyunjik, which Place with Rawlinson's permission had selected as a kind of recompensation for Rassam's *coup de foudre* on 20.12.1853 and what resulted from this (see p. 291), besides a number of sculptures and slabs from the same palace and from Nimrûd intended for the British Museum, and 80(?) cases for the Prussian Government (see above p. 296). W. Boucher had drawn the lost Kuyunjik slabs, but his drawings disappeared in London before being published. Only two rafts survived, and from these a bull and a winged figure from Khorsabad have reached the Louvre. They were shipped by the French ship "Manuel" together with 52 cases from the North Palace of Kuyunjik, packed by Loftus, who at Basrah had awaited the arrival of the French ship. Le Havre was reached in May 1856, and by the London steamer "Soho" Loftus' cases reached the British Museum in June of the same year.

In Iraq the modern traveller as well as the excavator may be annoyed by dysentery, repeated attacks of fever, and the "Baghdad tummy"; but vaccines and the medical insight of the present time tide them over the ordeals of the climate. But in the 19th century such names as C. Bellino, C. J. Rich, F. Cooper, Ch. D. Hodder, F. Fresnel, George Smith, E. de Sarzec, J. H. Haynes, and E. J. Banks speak for themselves, and one shrinks from thinking of what Assyriology lost in the three of them, who succumbed to illness in the middle of their work in the Middle East. Botta managed to pull through by means of his opium; but it is miraculous that Rawlinson and Layard, as well as later J. H. Haynes, R. Koldewey, and W. Andrae were capable of working also under the blazing sun of the Mesopotamian summer.

Besides the violent summer heat and the mosquito-infested pyrogenic marsh formations in southern Babylonia, we should mention the cyclonic gales, through which F. R. Chesney on 21.5.1836 when sailing down the Euphrates lost one of his ships, the "Tigris", with 4 officers, 11 sailors, and 5 natives. We should also mention early spring gales, which cover large areas with dust and sand, as well as inundations of the swelling rivers. We have still a distinct recollection of the spring catastrophe in March 1954, when Baghdad and the central Mesopotamian plain were assailed by severe floods from the waters of the rivers Tigris and Diyala, but a hundred years before, Loftus in 1854 after his brilliant success at Tell Šifr, which is situated at a fairly remote place in southern Babylonia, witnessed that the Shatt el-Kâr overflowed its banks so that he had to discontinue his excavations and the rapid rise in the level of the marshes produced by the inundation of the river branch for some time threatened to cut off his retreat.

§ 6. In 1820 Rich convinced himself and through the posthumous publication of 1836 of his results convinced others that Kuyunjik and Nalî Yûnus were the ruins of Nineveh, and on Mohl's request Botta started excavations there. The fact that it became Khorsabad, or some small part of it, which was excavated by Botta was due to chance. During Botta's otherwise unsuccessful excavations from December 1842 to February 1843 Arab onlookers noticed that every fragment dug out on which remnants of cuneiform signs were found, were carefully numbered and laid aside: the Frenchman searched for and collected inscriptions. Hence an Arab from Khorsabad came with two large bricks with inscriptions which he had found there, and sold them to Botta. This was the reason why Botta finally gave up the unsuccessful excavations at Kuyunjik and tried his luck at Khorsabad, where he was very successful. Layard consciously made for Nimrûd, which in 1840 had burnt itself into his memory for ever.

Most excavators in Mesopotamia in the 19th century were without any scientific archaeological training and held offices which were remote from Mesopotamian archaeology: Layard was loosely attached to the British embassy at Constantinople; Botta and de Sarzec were French consular officials, the latter at Basrah; Rawlinson, who after his return from London in the autumn of 1851 had control of all the excavations of the British Museum in Mesopotamia, was an officer

and besides British Consular and Political Agent in Turkish Arabia from 1843 to 1855; J. E. Taylor was British vice-consul at Basrah; Loftus was a geologist; George Smith an engraver, epigraphist, and Assyrian philologist; John P. Peters a Hebrew philologist, and H. V. Hilprecht an Assyrian philologist. Only J. H. Haynes had been active as an archaeological explorer at the American excavations in 1881–82 at Assos (Aiolis, Asia Minor) before his participation in the Nippur excavations: 1889 and 1890 as business manager and photographer, 1893–96 as field-director.

The enthusiasm and restless ardour characteristic of Botta and Place, Layard and Rassam constituted the tidal wave which washed ashore the irreplaceable finds which to this very day belong to the greatest museum treasures in the Louvre and the British Museum, and which likewise constitute the basis of our whole insight into the Assyro-Babylonian culture and history also by virtue of the excavated epigraphic material in the form of monumental inscriptions and cuneiform tablets. But it should not be forgotten that even though the excavators in the 19th century were aware that a ruin area, a *tell*, was identical with the existence of a piece of Assyro-Babylonian ancient history, the acknowledgement had not yet become a matter of conscience in the excavators: that it was important for science to get possession of this piece of ancient history as entire as possible. The excavators were dependent on government grants and private funds, and therefore the whole importance during the excavation work must be attached to what may be termed the hunting for museum specimens. Among these later entered as a very important constituent the modest-looking, often fragmentary cuneiform tablets; after Rawlinson's and Hincks' deciphering of the Assyro-Babylonian cuneiform script, scholars in the period after 1851 had begun studying the contents of the cuneiform tablets and realised that these to a greater extent than monuments, sculptures, and bas-reliefs gave insight into Assyro-Babylonian culture.

The *antikat*-hunting of the European-American excavators thus provided very different results from those of the natives mentioned above, but it is undeniable that the character of the excavations themselves suffered by it. Only V. Place, who resumed the Khorsabad excavations on 12.1.1852 was trained as an architect, but an understanding of the importance of stratigraphy was no more found than a method of

recording objects. They dug deep shafts in a number of places and connected these with tunnels, and what was found on the way during the digging, was without any consideration at all taken up to the surface of the earth. In spite of my undivided admiration for Layard I must admit that it sends cold shivers down my back when I read about his and Rassam's archaeological procedure: tunnelling along the face of the walls, obtaining light by occasional vertical shafts from the surface. Any form of accurate surveying in the underground space thus provided must have been completely impossible. It is admirable what Place, assisted by Mission Fulgence Fresnel's architect Félix Thomas, who used the same technique of excavation as Layard and Rassam as regards the remains of the buildings on the summit of Khorsabad, was capable of elucidating and conjecturally restoring, as appears from his publication, even though it has been realised after the excavations by the Oriental Institute of the University of Chicago in 1929-35 that the actual remains of the palace do not correspond in every detail to Place's plan, just as the Assyrian architect's un-oriental sense of symmetry must be ascribed to Place. Therefore Sir Ernest Budge in 1920 could rightly write: "No British excavator had yet laid bare the ruins of buildings of any Assyrian or Babylonian town."¹

When Budge in 1920 mentioned "British" excavators only, he was in part keeping Place's results in mind, but especially the turn of the tide as regards the interest in the excavations which started under J. H. Haynes and H. V. Hilprecht (1893-96, 1899-1900) at Nippur, where the uncovering of blocks of buildings gradually became decisive, and which on a large scale was realised by the German excavators Robert Koldewey and Walter Andrae at Babylon (1899-1917) and Assur (1903-14), respectively, where the purpose was the excavation of grandiose remains of buildings and fortifications within the extensive town area. But this turn of the tide gave rise to disagreement and quarrels during the excavation work at Nippur, in part in Babylon as well. The old peace on the sites under Botta's and Layard's absolutism was over.

The first occasion for quarrelling was the above-mentioned change in the view of the very purpose of the excavations, as it was second nature to Peters and Haynes, when the work was started at Nippur

¹ *By Nile and Tigris* I (1920), p. 126.

on 6.2.1889, that the search for museum specimens and cuneiform tablets was the main interest of the expedition. Hilprecht constantly objected in spite of the extraordinary success of the expedition as regards the finding of tablets, and finally effected that the temple area of Nippur became a centre of architectural-archaeological investigations and excavations. The second cause of the schism¹ was that Hilprecht as the Assyrian philologist of the expedition found it obvious that he should be its director. In this demand, which does not reflect individual ambition, a factual problem was set which was brushed aside by Koldewey as well as Andrae, whose points of view have met with approval in the *Antikat Act* of Iraq of 1924, Section 19, which does not demand the presence of a linguistic expert (epigraphist) on an excavation expedition. On this last point see further below.

The new interest within Mesopotamian archaeology in remains of buildings of any kind, monumental, such as palaces and temples, as well as private or of a fortificatory character, was carried into effect with the greatest precision by Koldewey and especially by his pupil Andrae. The following statement by Koldewey is incontestable: "Es bedeutet keine Herabsetzung der Bemühungen unserer Vorgänger, wenn man feststellt, dass ihre Resultate durch unsere langjährigen Ausgrabungen, soweit es die Erkenntnis der Stadtruine anbelangt, fast in allen Stücken überholt sind, sodass es sich schwerlich lohnen würde, den häufigen Irrtümern überall ausdrücklich entgegenzutreten".² But the publication drop by drop of the excavation work which was slowly proceeding year by year, in the *Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin* (1899 ff.) was not fit for stimulating the interest in the grandiose undertaking, also because the finds on the whole were without interest. Koldewey was himself aware of this: "Das allmähliche Fortschreiten der Aufdeckung, so wichtig und anregend es für den Ausführenden ist, pflegt für den weniger Beteiligten, namentlich beim Rückschauen über mehrere Jahre, von untergeordneter Bedeutung zu sein".³ To this it must be added that the ground-plans communicated in the *MDOG* have been severely criticised by German research-workers,⁴

¹ See H. V. Hilprecht, *The So-Called Peters-Hilprecht Controversy* (1908) and the official proceedings of the committee set up by the Trustees of the University of Pennsylvania published 1908 (357 pages).

² *Das wieder erstehende Babylon* ... (1913), pp. VI-VII.

³ *Ibid.* p. III.

⁴ See e. g. E. Unger, *RLA* I (1932), p. 354 (Babylon), p. 195 (Assur).

and that an excavation without a final, detailed scientific publication must be said to mean to science the same as if it had not been made. Apart from Koldewey's own publications (1901, 1911, 1913, and 1918) only in 1926 and later four special publications on Koldewey's excavations were issued (Merkes 1926, *The City-walls* 1930, *The Palaces* 1931-32, *The Marduk Temple* 1938); from the Assur excavations nine special publications from 1909 to 1954.

Hilprecht's above-mentioned demand became of current interest through Koldewey's and his pupil and collaborator Andrae's attitude towards the question about the necessity of an Assyrian philologist's presence at excavations in Mesopotamia. Koldewey was an architect and an architectural historian, and the choice of him as leader of the excavation of parts of the huge Babylon area showed that the main importance would be attached to a minute investigation of the remains of buildings. The German government, eagerly supported by Wilhelm II, wanted to make a first great contribution within the field of Mesopotamian archaeology and perhaps also to provide a place in the sun for Germany there. E. Sachau was sent on an expedition to Mesopotamia in 1897-98 accompanied by R. Koldewey, who had been active as an excavator at the investigations of Greek temples in Southern Italy and on Sicily, had participated in the excavations of the Second and Third Expeditions at Senjirli in Northwest Syria (1890, 1890-91), and in Mesopotamia in 1887 had made excavations at Surghûl and Al Hibbah. Babylon was selected, and the excavations were sponsored by the Deutsche Orient-Gesellschaft in connexion with the Generalverwaltung der Königlichen Museen, Berlin. In spite of the indispensability of the presence of an epigraphist during the excavations, Bruno Meissner, E. Lindl, and F. H. Weishach, who succeeded one another, together were only during the period from 26.3.1899 to 22.2.1903 attached to the expedition, and during the excavations at Assur from 14.8.1903 to the spring of 1914 any Assyrian philologist was conspicuous by his absence apart from a short visit to the excavation area made by Fr. Delitzsch in the beginning of May 1902, after which he stayed for a month or so in Babylon. But it should be added that Andrae's excavations were made with the greatest care and that his interpretation of the far greater number of building strata with which he was faced at Assur than Koldewey at Babylon and the mastery with which he led the expedition work, makes him a surprisingly mature forerunner of

the later excavation leaders as regards capacity. Andrae taught himself Assyrian so that he could make historical-chronological determinations himself. Koldewey, on the other hand, who in his youth had got to know the Greek temples, did not even search walls and bases for the foundation-stone documents from which appear the name and purpose of the building, in order not to disfigure the buildings. "Die Ruinen werden durch ein solches systematisches Abtragen dermassen verunstaltet, dass ich mich bisher immer noch geseheut habe, diese Arbeit auszuführen."¹

Koldewey's sentimentality as regards the disfigurement of buildings through systematic excavation is quite out of place. Once and for all, it must be stated that all excavation is destruction; the point is that the excavation staff through detailed cataloguing of strata and the most careful three-dimensional recording of objects found, through publication of the results in the most detailed form secures for itself and posterity a possibility of getting an exact picture of the *tell* and its contents from before the start of the excavation to its conclusion. It is also of the greatest importance that an Assyrian philologist is a member of the excavation staff in order that textual evidence may be interpreted alongside of the excavation work. Since the excavations at Ur and Kish in 1922 ff. and 1923 ff., respectively, an Assyrian philologist, as a matter of course, has been considered as necessary for the accomplishment of the excavation as the archaeologist and the architect, whatever is to be read in the Iraqi *Antikat* Act of 1924, Section 19;—the prehistoric sites excepted.

Layard's and Rassam's publications on their excavations were of quite a popular shape, and to a certain degree it may be said that of the much more comprehensive excavations much later at Babylon and Assur we only have semipopular accounts from 1913 and 1938, respectively, as regards a full report on the procedure and the results of the efforts of so many years. Special publications, on the other hand, have been issued, as mentioned on p. 307. Only after the end of the First World War, the interested parties have been faced with really exact and systematic excavation publications, which carefully catalogue strata as well as objects found. But even if we understand that a final publication requires an overwhelming effort, it is regrettable that the Nuzu publication did not see the light until 1937–39, the excavations being

¹ *Das wieder erstehende Babylon* ... (1913), p. 151.

finished in 1931; and that the detailed description of the earliest and deepest levels (IX–XX) at Tepe Gawra was not published until 1950, although the work of the expedition ceased in 1938. From Tell Asmar (1930–36), Khafajah (1930–38), and Arpachiyah (1933) no final publication is available yet. On the excavations at Bismāya in 1903–04 only a popular report from 1912 has been published, etc. Perhaps Section 22 of the Iraqi *Antikat* Act, as mentioned above, p. 279, may stimulate the publication work.

It follows from the excavation method used by Botta, Place, Layard, and Rassam, and unfortunately by many others in the 19th and—alas!—in the 20th century as well, that the excavation areas left by them are best characterised by Sir Flinders Petrie's words: "ghastly charnel houses of murdered evidence." Add to this that a great many things were lost partly because of ignorance and carelessness, partly because of lack of technical insight and aids. Thus it seems that Layard during his first campaign at Nimrūd (9.11.1845–24.6.1847), although familiar with the distinct monumental cuneiform inscriptions, was not acquainted with the small cuneiform tablets, the exterior appearance of which is unpretending, and which, when uncleaned, do not seem to be anything but lumps of clay without any script. At any rate experts have wondered that Layard did not find tablets, as the palaces of Nimrūd ought to have contained archives. Samuel Birch told Budge¹ that it was he who taught Layard what the few specimens of tablets shown to him by Layard were, a piece of information which we must simply accept. As mentioned above p. 294, Birch was the scholar who assisted Layard in many ways during the preparation of *Nineveh and its Remains*, and Layard's description of Assyrian inscriptions on "prepared bricks, tiles, or cylinders of clay,"² in which the first two terms by Layard in 1853³ was changed into "tablets", thus perhaps is due to Birch's guidance. Thus it seems that Layard because of ignorance of the phenomenon: cuneiform tablets, of which Rich's *Second Memoir on Babylon . . .* of 1818 might have informed him, had such tablets, whole as well as fragmentary, thrown away together with the piles of earth that had been excavated.

¹ See his *Rise and Progress of Assyriology* (1925), pp. 83 f.; the year 1849 should, however, be corrected into 1848, as *Nineveh and its Remains*, which contains the correct view (see below) was being printed and published during the years 1848–49.

² *Nineveh and its Remains . . .* II (1849), p. 185.

³ *Discoveries in the Ruins of Nineveh and Babylon . . .* (1853), pp. 344 f.

Unpardonable carelessness is characteristic of Rassam's excavation of Ashurbanipal's palace at Kuyunjik during the period after 20.12.1853. We know that Rassam had a bad conscience and that his procedure was completely illegal, to put it mildly, and we also know that through this excavation he presented the British Museum with the great lion-hunt gallery and Ashurbanipal's invaluable library. But even if this was an immense discovery, posterity may be allowed to regret that everything else about the palace is practically unknown to us. Rassam was *antikathunting* in a hurried and unobservant manner; there was no adequate planning, and we miss such records as Layard usually kept, which were indeed extremely modest, but after all better than nothing. The excavation of this palace, which was a veritable gold-mine as regards historical documents and works of art, would have justified any expense, even if it had extended over long periods; but Rassam, for want of funds, had no time for it. In March 1854 he left Mosul and went to England; the English government then found a use for his competence at Aden and in Abyssinia, and he did not resume the excavation work in Mesopotamia until 1878.

Not only difficulties of transport, so that finds sticking in the mud were left for the Arab lime-burner, or disasters as that at Kurnah, but lack of technical insight as well were the cause of the total destruction and downright annihilation of excavated finds. Again and again we read sentences like the following in Layard's *Nineveh and its Remains*: "At length a perfect helmet, resembling in shape, and in the ornaments, the pointed helmet represented in the bas-reliefs, was discovered. When first separated from the earth it was perfect, but immediately fell to pieces. I carefully collected and preserved the fragments, which were sent to England";¹ "Several helmets of other shapes, some with the arched crest, were also uncovered; but they fell to pieces as soon as exposed; and I was only able, with the greatest care, to gather up a few of the fragments which still held together, for the iron was in so complete a state of decomposition that it crumbled away on being touched";² "Although the skulls were entire when first exposed to view, they crumbled into dust as soon as touched, and I was unable to preserve either of them";³ "These ivories, when uncovered, adhered so firmly

¹ I, p. 341.

² I, pp. 341-42.

³ I, p. 353.

to the soil . . . that I had the greatest difficulty in extracting them . . . I spent hours lying on the ground, separating them, with a penknife, from the rubbish by which they were surrounded . . . The ivory separated itself in flakes. Even the falling away of the earth was sufficient to reduce it almost to powder".¹ Rassam had similar experiences, thus at his excavation of Balâwât he also found a second pair of bronze gates, but "they were found very much injured and as soon as they were exposed to the air, they crumbled to pieces".² We now know that these sentences only are evidence of lack of technical insight, as we remember the triumphs achieved by Sir Leonard Woolley at the preservation of the grave finds at Ur, e.g. Queen Shub-ad's harp,³ by means of plaster-of-paris, prepared from gypsum of Montmartre, Paris, plastering, and by means of paraffin wax and muslin to harden or reinforce metal, mosaic, bits of shell, and lapis lazuli inlay, besides skeletons, so that the objects found were intact after they had arrived in London. "There the upper coat of linen was steamed off, the superfluous wax first scraped and then washed away with benzine, the more discoloured bones bleached with peroxide of hydrogen and hardened, if necessary, with cellulose or gum damar, and the skeleton could be shown exactly as it had been found, with not one of its crumbled and splintered bones disturbed".⁴ One thinks sadly of the skulls mentioned by Layard and because of the report that Layard's Nimrûd ivories were reduced almost to powder, rejoices in looking at the reproductions of M. E. L. Mallowan's epoch-making finds of ivories at the excavations at Nimrûd in 1952 and 1953,⁵ not least his "Mona Lisa".⁶

Countless cuneiform tablets have been destroyed during the excavations of the 19th century, to begin with, as pointed out above, because the unrecognisable ones were removed with other débris of excavation; but also later lack of technical treatment immediately after the finding has caused destruction or annihilation especially of the cuneiform tablets made of unbaked clay. One dares not think of the question how much was lost, e.g. through untrained illicit excavations in Abû Habbah (Sippar), before Rassam during the period from January 1881 to July

¹ 11, pp. 8-9.

² *Asshur and the Land of Nimrod* (1897), p. 215.

³ See *Ur Excavations* 11 (1934), pp. 74 f.

⁴ Sir Leonard Woolley, *Digging up the Past* (1930, repr. 1949), pp. 100-101.

⁵ See *Ill. London News* 15.8. and 22.8.1953.

⁶ See *ibid.* 8.8.1953.

1882 made his unique findings of tablets there. Much was gathered in through Rassam, but that he, too, must have sustained great losses appears from the fact that the Sippar tablets, as many others from South Babylonia (Warka, Senkereh, Kish), only were sun-dried. In the British Museum many unbaked tablets were completely spoilt when Mr. Doubleday, the repairer, attempted to bake the unbaked tablets; "the result of his "firing the tablets" was that the whole surface of both sides of each tablet flaked off and fell into dust, and the inscriptions were lost for ever".¹ After 1859 the Museum in R. C. W. Ready had an exceptionally competent repairer and cleaner, and it is due to him that numerous ivories, bronzes, pieces of pottery, and baked cuneiform tablets this very day are fit for study. His procedure as regards the tablet of baked as well as unbaked clay was based on an analysis of the filaments, which he found to be composed of sodium. In order to be able to prevent the "blooming" of the tablets, he put them into cold distilled water for several days at a time, through which method the salt was extracted; after the process was finished, the tablet was clean and every character legible.

In our day the cleaning and preserving of the tablets are made in the very finding-place. Buried in the damp and salt-laden soil for millennia, the unbaked tablets have become soft as cheese; still it is necessary for the excavation expedition very soon to get acquainted with the information about possible dating, kings' names, or names of buildings, which may be of the greatest value for the further procedure during the excavation. "At Ur any lumps of clay looking like tablets are lifted from the ground still encased in their covering of earth, and are packed in metal boxes filled with clean sand; after they have been left for a few days to give the clay a chance to dry, the boxes are put into a rough-and-ready kiln heated by vaporised crude oil and are baked until the tins are red-hot and the clay is turned into terracotta. Then the tablets are taken out . . . the faces can be cleaned by brushing without any risk to the legibility of the characters".² Cleaning of baked cuneiform tablets for the same reason also takes place in the excavation area. There, too, it is necessary to make them pass through a process before their possible information can be used during the work; as regards

¹ Sir Ernest Budge, *Rise and Progress of Assyriology* (1925), p. 148.

² Sir Leonard Woolley, *Digging up the Past* (1949), pp. 101-02, and Pl. 29; cf. also P. Delougaz, *The Treatment of Clay Tablets in the Field* (SAOC 7, 1933).

both kinds of tablets the processes mentioned also mean the absolute preservation of the objects found. Furthermore it should be mentioned that a procedure has been invented through which paper-thin rubber latex impressions of cleaned tablets with inscriptions may be made. This was first done in 1952 during the American excavations at Nippur. On the basis of these rubber impressions casts may be made in the museums which are completely identical with the originals. The technique of making rubber latex impressions is of great importance after the Iraqi *Antikat* Act of 1924 in Section 22, as mentioned above (p. 279), has established the right to reserve for the Iraqi Museum at Baghdad such objects found as are unique or necessary for the museum to be scientifically adequate.

§ 7. Especially in the period after World War I the excavation work in Mesopotamia has been characterised by the strictest demands for methodical order, rationalisation, and systematics. The purely technical part of the rough as well as the finest work has constantly been improved, and one feels relatively confident before the careful and very detailed reports which after 1918 have been published. But even though, as stated above, plaster-of-paris, muslin, paraffin wax, a new method for the preservation of tablets, rubber latex impressions, and many other technical details which amongst other things have contributed to the preservation of the finds of pottery so highly treasured since 1918, —even though all these are technical improvements of the greatest value, the central archaeological problems during an excavation are still burning questions and require exceptional insight during the progress of the work.

If the excavators do not, as in the case of Kuyunjik, Nimrûd, Babylon, and Assur, through the explorations of previous research-workers know the position of the site and its possible value for excavations, it is necessary to make a choice as regards the working-place of the expedition. Through so-called survey expeditions it has at certain times in the history of research been tried to provide further orientation: the Catherine L. Wolfe Expedition (H. Ward, J. R. S. Sterrett, J. H. Haynes) during the period from January to March 1885 examined all *tulâl* between Baghdad and Muqayyar: Abû Ḥabbah (Sippar), Babylon, Birs Nimrûd, Nuffar, Al Hibbah, Surghûl, Tellah, Ur; the huge ruin area of Nippur finally was the one preferred. Eduard Sachau accompa-

nied by R. Koldewey in 1897–98 visited the whole of Mesopotamia and submitted a recommendation of the Babylon area. As a last survey may be mentioned W. F. Albright and Raymond P. Dougherty's scouring of southern Mesopotamia from 25.12.1925 to 27.1.1926 and from 12.2. to 16.3.1926, after they in 1925 had visited Balih and the Habur area out of Mesopotamia. The last-mentioned survey the same year (1925) had an extra-Mesopotamian parallel in P. Perdrizet, H. Seyrig, D. Schlumberger, and Piquet-Pellorce's explorations in the Carchemish oval for the purpose of searching for ruin areas from the Hellenistic period.

But the excavator who has no survey report on which to base his work and who perhaps wants to make his own discoveries and to supplement his keen observations with knowledge of a historical kind or with more general reflexions, is with great certainty capable of selecting his excavation site. Much can be learnt from Woolley's reflexions¹ on the question why among a great number of mounds in the 'Amuq plain he just selected the Tell 'Aṣṣhānah (Alalah) beside Orontes near Judaidah and Aleppo, where he obtained extraordinary excavation results in a total of seven spring or autumn seasons between 1936 and 1949. Historical knowledge and general reasoning in this case were Woolley's main support when a choice between many *tulūl* was to be made. But the very observation of an area where there is nothing upstanding may put the expert on the right track. "In a dry summer the grass withers more quickly where the soil lies thin over the buried tops of stone walls, and I have seen the entire plan of a Roman villa spread out before me where no spade had ever dug; darker lines in a field of growing corn or, in the very early morning, a difference of tone given by the dew on the blades, will show where buildings run underground: nowadays air photographs bring to light masses of evidence invisible to one who stands upon the ground".² A parallel to this case is the finding of a cemetery at Carchemish; fragments of pottery which strewn the ground indicated the possibility of a graveyard, but still Woolley³ in this case, too, in spite of the fact that nothing above the field was to be seen besides, was capable of indicating the position of the various graves: "the field, being fallow, was covered

¹ Sir Leonard Woolley, *A Forgotten Kingdom* (1953), pp. 20–22.

² Sir Leonard Woolley, *Digging up the Past* (1949), p. 28.

³ *Ibid.* pp. 30–31.

with sparse growth, for the most part shallow-rooted, but with a mixture of sturdier weeds of a sort whose roots go deeply down; if one looked carefully it became manifest that these weeds were sometimes single, but often in clumps of four or five plants, but a clump never measured more than six feet across; at some time or another the gravel subsoil had been broken up, so that the plant roots could penetrate it, and it had been broken up in patches which would be just the right size for graves; the broken pottery on the surface represented either shallow burials or, more probably, offerings placed above the graves at ground level, and every deep-growing weed or group of weeds meant a grave-shaft".¹

In Mesopotamia mainly two observations have been decisive of the excavator's selection: partly and especially the larger or smaller ruin mounds, the *tulûl*, which meet the eye in a multitude of places; by means of the reading of the cuneiform texts many of these ruin areas are known by name and position and the excavator's choice often depends on the question whether he wants through the work of the expedition to promote cultural and historical connexions or whether he wants to try to blaze completely new tracks, thus excavation on Birs Nimrûd (Borsippa) may supplement our insight into the history and topography of Babylon while Nuzu excavations may open completely new vistas. But surface findings of sherds of pottery ever since the day in April 1918 when R. Campbell Thompson on Abû Shahrain found fragments of a kind of pottery which reminded him of the Susa I pottery, may also be an important criterion for the excavator and guide and instigate him to start further examinations, perhaps digging. The first interest in sites like e. g. Jemdet Nasr and Jarmo originated in surface findings of pottery sherds.

When the excavation site has been selected, the excavation staff is composed and the labour forces are secured, mostly from the neighbouring villages, As foremen, on the other hand, selected men find their place; often these have participated in a good number of excavations in positions of trust, have great experience both as regards the excavation work and the handling of native workmen; competent foremen are of vital importance for the good results of an expedition; they secure the whole mechanical aspect of the work and are often capable of doing much more than that. Above, on p. 298, we have mentioned

¹ *Ibid.* p. 31.

what we have been able to trace as regards the sizes of the labour forces at different times in 21 different sites, and it was noticed that the number to some degree depended on the magnitude of the task. Furthermore it should be kept in mind that workmen cost money and that their number is to some degree dependent on the funds available, or inversely: the funds available to the expedition decides the kind of task. The question what number of workmen is required therefore cannot be answered in general, but one may take the advice of experienced archaeologists.

Indeed, the number of workmen also depends on the size of the excavation staff. It is no wonder that George Smith's results at Kuyunjik in 1874 with 600 workmen mainly consisted in the finding of several hundred cuneiform tablets. Workmen give work to the excavation staff, but Woolley had himself experienced that a staff of five is capable of managing 300 workmen, "provided that they have good foremen to back them in the actual supervising",¹ and provided that it is a question of excavation of temple ruins, "where there is a vast amount of earth to be shifted and objects are likely to be few".² If, on the other hand, it is a large cemetery as at Ur, the graves produce objects in abundance "requiring much fine work and elaborate note-taking, but lie deep down in the soil and so are slow to come at, the same staff (5 persons) was hard put to it to keep pace with 180 men".³ Robert J. Braidwood in a letter of 28.4.1953 has communicated reflexions to me which on several points coincide with Woolley's views; it is natural and in this connexion of importance that Braidwood distinguishes between prehistoric and historic excavations. As to the latter he is of opinion that a staff of 5, a really good foreman, and the addition of several local sub-foremen may run 200-300 workmen; in the case of prehistoric excavations, which need very tight control, 75 workmen is the maximum for a staff consisting of 5 + the foreman.

As to the work on the excavation site of a big gang of workmen the organisation is as follows: "All the men are directly under the orders of three trained and trusted Arab foremen, who are not Iraqis, but come from far away in North Syria, whereas the workmen are recruited from the neighbourhood. They are divided up into small parties con-

¹ *Ibid.* p. 37.

² *Ibid.* p. 37.

³ *Ibid.* p. 37.

sisting of a pick-man, a spade-man, and three or four basket-men; of these the pick-man is selected for his experience and his superior intelligence—he is generally one who has been employed by us for a number of years, and is not so old as to have grown stupid nor too young to exercise authority; he uses an army entrenching-tool (the best tool I know for excavating in Iraq) and is the head of his little gang; since he does the actual cutting-away of the soil it is he who discovers things, and it is up to him to see that he exposes them without damage. The second man, armed with a long-handled native spade, puts the loosened earth into the baskets, and if the pick-man has missed anything the spade-man ought to see it: the basket-men are either the older fools or the young recruits, and their job is purely mechanical—they simply have to carry the full baskets to the light railway, tip the earth into the wagons and come back for more. As individuals, the basket-men count, perhaps, for less, but it must be remembered that on the distance which they have to go and on the pace at which they walk depends the whole progress—and the cost—of the excavation; the director has to see to it that the railhead is as close as possible to the dig, the foreman that there is no slacking on the road. The Arab foreman is, next to the archaeologist himself, the most important person on the excavations, for on him depends the conduct of the whole gang of diggers".¹ It is a common law everywhere that the excavator apart from the wages pays *baḳshīsh* to the workmen for the objects they find; this old custom stimulates the workmen's attention, prevents pilfering and introduces a sporting element into a routine work new to the Arabs, which especially appeals to their gambling instinct. At the moment the pick-man or others see something of special interest,—the face of a mud-brickwall, copper or bronze, pottery or a change in the character of the soil, he is to inform the nearest foreman, who either gives the pick-man the necessary instructions or summons a member of the excavation staff, and then the entrenching-tool and the spade are often replaced by knife, brush, and tea-spoon.

As to the excavation staff, we have seen above how Woolley and Braidwood at Ur and Jarimo, respectively, obtained extraordinary results with a staff of 5. Disregarding economic limits to the composition of the excavation staff and to the extension and duration of the work of the expedition, we may perhaps point out how the ideal staff for a

¹ *Ibid.* pp. 37-39.

historic excavation may be composed. The director is the leader of the expedition, it is his intentions that are carried out, he alone is in supreme command; he organises the course of the work, he need not be a widely read scholar, as it is more important for the archaeologist to be possessed of the engineering training of mind and sense, but above all he must be capable of doing two things: he must master the stratigraphical method, i. e. be able to read his sections, to identify layers, and to interpret them; secondly: he alone is responsible for the record of the excavation work.

Each of the other members of the staff contributes within its special field of activity to make it possible for the director to perform his above-mentioned formidable task and first of all to make his interpretation and his complete record of every detail during the progress of the excavation. The architect and the epigraphist (Assyrian philologist) are indispensable helpers to the director on a historical site, as the evaluation of building remains and literary objects found require the collaboration of specialists. It seems unnecessary that the director himself should be a linguist (as e.g. Langdon at Kish 1923 ff., Chiera at Nuzu 1925-26, 1927-28, and at Khorsabad 1929), as it should be kept in mind that technically the methods of excavation are identical whether a literate or an illiterate culture be in question. The drawbacks of having an architect as director are mentioned above pp. 307-08. The director's right-hand man, as regards the daily, practical life of the expedition, is the deputy director, who is in charge of housing, equipment with various kinds of excavation tools, accounts, correspondence, food-supplies, first-aid, and a daily hospital-hour; it would be very desirable that a medical man (surgeon) was attached to the deputy director's department. The staff is further made up by site-supervisors in the case of an extensive excavation area, the small-find recorder, the pottery-assistant, the field-chemist, the photographer, and the draftsman. Important work is done in the expedition camp, where amongst other things there ought to be a reference library consisting of archaeological and Assyrian handbooks and other publications; in the pottery-shed, which must be in easy reach of a water-supply, pottery washing is done, cleaning with hydrochloric acid, marking, mending, sorting, and storage, besides indexing of small finds including bones and soil-samples (seeds, leaves, plants, etc.); in the field-laboratory, where distilled water besides numerous

chemicals must be available, metal objects must be preserved, particularly ironwork to enable them to travel without damage; the same applies to objects of wood, bones, and unbaked cuneiform tablets and seals; the process to which the two last-mentioned kinds of finds are subjected is mentioned above. It is further incumbent on the field-chemist, perhaps assisted by a specialist, to make chemical, physical, and botanical analyses of soils; the photographer has his studio, as all field-photographs must be developed immediately, and afterwards carefully indexed as regards time, position, exposure, and the filter used. Often towers are erected for high-angle photography—I have myself seen such a tower at Jarmo—; aerial photography has been practised since 1913 (Ostia)¹ in connexion with archaeological work, and stereoscopic photography can be used to heighten the relief effects.

The beginning of practically every excavation works out as follows for the archaeologist: he will begin with trenching whatever be his point of attack. This start is traditional: Napoleon III's collaborator at his work on Caesar's history published in 1865-66, Colonel E. G. H. C. Stoffel, examined the buried fortifications of Caesar's camps with massed formations of trial-trenches. The colonel had ascertained the significant fact that soil once disturbed rarely quite resumes its original compactness and therefore through his trial-trenches across the field might ascertain whether his workmen came across resistant soil or not; in the former case he was sure that the soil had never been removed, and that therefore no Roman ditch had been dug in this place. Famous are also Sir W. M. Flinders Petrie's excavations in 1890 at Tell el-Hesi, which at that time was believed to be the site of Lachish, as he dug a trial-trench into the steep side from top to bottom of the *tell*, and after he had noted the exact level at which every potsherd was found was able to present a relative Palestinian chronology, which in absolute figures was correct as far back as about 1500 B.C.; before that the dates were much too low.

¹ Next to the Ostia aerial photos (1913) follow those of O. G. S. Crawford in his *Air-Survey and Archaeology* (1924) and *Air-Photography for Archaeologists* (1929) and those of Antoine Poidebard, *La trace de Rome dans le désert de Syrie. Le Limes, de Trajan à la conquête arabe. Recherches aériennes* (1925-31) ... (1934; 2 vols.). In Mesopotamia I think Alexander Beazeley took the first aerial photographs; see *British Museum Quarterly* 1926 and *OIC* X111 (1932), p. 64 (Khafājah 1930-31); as for Iran, see Erich F. Schmidt, *Flight over Ancient Sites of Iran* (1940). Cf. J. Carcopino, *Journal des Savants* 1949 and M. B. Cookson, *Photography for Archaeologists* (1954).

Petrie's vertical trial-trench, which has later been used everywhere in the Near and Middle East excavations¹ and perhaps especially in the case of prehistoric and prehistoric settlements, where the sequence of pottery is of outstanding significance, may be said to have been of great importance (cf. Ur 1929-30: 60 feet deep "Flood Pit"; Kuyunjik 1931-32: test pit 90 feet; Hassuna 1943-44; Eridu 1946-49). But apart from this the vertical trial-trench should not be overestimated and had better not be the only form of excavation, even though finds are small. On the whole trenching involves an element of risk when used within a historical town area. Woolley emphasises that "trench-work ought to be stopped as soon as it has served its purpose by finding out the whereabouts of buildings"², and a prominent scholar of authority like Sir Mortimer Wheeler³ says: "The old practice of cutting trial-trenches, of making *sondages*, as a preliminary to, or even in lieu of, area-excavation was frequently a substitute for intelligent thinking and clear aiming. It was to a large extent "shooting into the brown" on the off-chance of bringing down a bird. Trial-trenches rarely prove anything, save of the most general kind. I have in mind a long and wide trial-trench cut by an eminent archaeologist across a famous town-site without apparent result; whilst subsequent systematic excavation, initiated on an altogether different basis, proved that the trench had in fact passed through and utterly failed to reveal a building of unique character."

When Victor Place during the period from 12.1.1852 to the latter part of April 1855 assisted by Félix Thomas from 14.3.1853 patiently recorded the plan of Sargon's palace complex at Khorsabad, this was the first attempt at wall-tracing in Mesopotamian archaeology, which is the proper purpose of trenching. But at Khorsabad the walls stood too high to make trenches practicable and instead Place resorted to an elaborate system of tunnelling, a method, also used by Layard and Rassam, which has nothing to recommend it apart from the fact that it produced brilliant results as regards museum specimens. Wall-tracing reached a high degree of efficiency under Koldewey at Babylon and Andrae at Assur, and was continued by their pupils J. Jordan,

¹ See e. g. E. Chiera, *They Wrote on Clay* (1939), pp. 34-35: Tell Judaidah ('Amuq No. 176).

² *Digging up the Past* (1949), p. 47.

³ *Archaeology from the Earth* (1954), p. 63.

A. Nöldeke, E. Heinrich a. o. during the Warka excavations (1928-39) under the auspices of the *Notgemeinschaft der Deutschen Wissenschaft*. Also Sir Leonard Woolley's ziggurat and temple excavations at Ur (1922-34) as well as P. Delougaz's recovering of the temple oval at Khafâjah (1932 ff.),¹ the latter influenced by the technique of the Warka excavations, to adduce a couple of examples, show the high standard reached in methodical accuracy of excavation besides the system of recording most meticulously founded by Andrae during the Assur excavation and only recently improved by his successors. In this connexion we should also mention Woolley's fabulous technique of extracting most valuable objects from the excavation area and the art with which he was capable of preserving them.

Apart from palaces and temples, which foundations and supporting architectural units were of baked clay, the commonest building material in Mesopotamia was mud brick, and mud-brick walls must necessarily be thick. When they, because of old age, violent showers of rain, or events of war, collapse, the amount of débris is very great and fills the rooms to a considerable height; mud bricks cannot be used twice, and as it is expensive to drive or carry the rubbish away, it is preferred to level the surface of the ruins and then to build on top of these. In this connexion one thing must be emphasised: none of the towns of Mesopotamia is level, it was rare that a town as a whole was destroyed or rebuilt at one moment and at one horizon. Generally the houses were replaced as they decayed as a consequence of the impact of weather conditions or war, but this took place at different times; the town as a whole was in a constant condition of destruction and construction. Hence the aspect of the town presents itself like this: as the town area is elevated and gets the character of a hill, some buildings are seen on its slopes, others on its summit, and these may be synchronous or not. This use of mud bricks as building material resulted in the deepening of the strata on a Mesopotamian site. It is intelligible that these deep strata may encourage and has encouraged to drastic methods of excavation considering all the rubbish that was to be removed, but if the procedure outpaces the supervision, it is irreparably detrimental to the excavation. It is true that a mud-brick building is

¹ Cp. also the fine investigations into the two phases of Sin Temple VII in Pinhas Delougaz and Seton Lloyd, *Pre-Sargonid Temples in the Diyala Region* (1942; *OIP* LVIII), pp. 125 ff.

dissolved into many feet of an almost homogeneous deposit, that the desert wind can cover this with a thick layer of undifferentiated sand, that violent showers of rain can carry material in bulk, artificially mix it and level it. Therefore it may to begin with be difficult for the untrained as well as the experienced excavator for want of continuous building levels to get a general view of the stratification of the site; but it is absolutely necessary to attain to such a general view, otherwise all relative (as well as the absolute which cannot always be obtained) time determinations are all in the air. The difficulties are great because the site is not level; as mentioned above, you may find a potsherd at one spot 10 feet below a potsherd of precisely the same date at another spot; but an archaeologist of outstanding quality like Sir Mortimer Wheeler mentions various means of dealing with the sun-baked ruins of the Orient: "Damping, and careful scraping with a knife or turf-cutter, will often provide the remedy by bringing out the more subtle variations of colour or material. Observation in different lights at different times of the day may help. In a difficult and important section, observation may be continued over a period of days before certainty is reached. And finally an attempt must be made to "read" the section - to discriminate, without prejudice, between the more significant and the less significant differentiations of strata: for example, between a mere "tip-line" in a continuous accumulation on the one hand and a substantive and emphatic occupation-level on the other."¹

As a further certainty that the importance of the stratification during the progress of the work is kept in view and never lost sight of, Sir Mortimer Wheeler recommends the use of the control-pit (2½ feet square to a depth of 2 feet lower than the level of the work), "a principle of universal application in archaeological excavation."² "Its purpose is to enable the supervisor, with a minimum disturbance of the strata, to anticipate the nature and probable vertical extent of the layers which are being cleared by his main gang. It is a glimpse into the future of his stratigraphical work. Without it, neither the supervisor nor his diggers, working blindly from the top, can avoid the confusion of the lower part of one stratum with the upper part of the next below it. In other words, stratification must, by its nature, always be controlled from the side, i. e. from the side of the control pit, since it obviously

¹ *Archaeology from the Earth* (1954), p. 44.

² *Ibid.* p. 66.

cannot be controlled prophetically from the top: *vertical digging first, horizontal digging afterwards*, must be the rule. Control-pits must be sufficiently numerous to minimize risks arising from the unevenness or interruption of strata . . ."¹

The interpretation of the layers is still more important than the identification of them. In all Mesopotamian ruin areas a "burnt stratum" is recognised by the red colour of the rubbish, but if the excavator in different strata, not separated by such a stratum, observes change of pottery, he should not wonder at not coming across an invading foreign people which has made itself master of the town area with fire and sword and settled there has used its new pottery. It should be kept in mind that pottery-making is an essentially local industry and that a change therefore need not mean invasion. Furthermore: pottery-sherds which are found lying flat in a stratum probably are found in their original position, whereas if they are found on edge, they may have sunk down to their present stratum from a higher one, thus being later. And finally: in a temple situated in a certain stratum the excavator ought to be suspicious of any object found there: "its date should be *ipso facto* considered suspect,"² for "the contents of such a treasury do not then necessarily illustrate the art and craft of the time to which the temple belongs";³ Woolley at Ur in a temple from the end of the Late Babylonian period found a statue of a goddess with a pearl necklace from Sargonic time, and the great distance in time displayed by this example is a memento to everybody.

These are some exemplifying details with which everybody may be familiar; still, erroneous interpretation of the strata is a constantly lurking danger. A warning example originates from R. Macalister's Gezer excavations in 1902-09, where the stratigraphy was neglected and surveying was inadequate. Through the failure to recognise a gap of some five centuries in the occupation of his site, his and F. Bliss' Palestinian iron-age chronology for some time was to subvert the dating of these centuries in Palestinian chronology. Not until several years later the error was rectified by the evidence of the excavation of other sites. First of all it is decisive that "no chronological sequence can be regarded as established securely on the basis of a single sec-

¹ *Ibid.* p. 66.

² Sir Leonard Woolley, *A Forgotten Kingdom* (1953), p. 148.

³ *Ibid.* p. 148.

tion."¹ But even when the most careful excavator interprets on the basis of his observations doubts may be raised. In Woolley's relative chronology with regard to the Royal Cemetery at Ur "the grey or barren stratum" plays a very important part, in the final publication from 1934 being identified with "the coloured stratum" which was found in the season of 1929-30. In 1937 H. Frankfort,² indeed, expressed his doubts as to the stratificatory basis on which Woolley built the chronology of the Royal Cemetery, and in 1941³ I stated in detail the reasons for my dissociation from Woolley's point of view.

A pitfall for chronological interpretation, whether expressed relatively or in absolute figures, in Mesopotamia amongst other things is the fact that the density or height of débris cannot with certainty be used for a dating. I am not thinking of comparison between sites situated far from each other, where the mode of life and the density of the population were different; thus R. Ghirshman and G. Tellier in 1930, delegated by H. de Genouillac's Lagash expedition, at Medain north-east of Lagash, ascertained that four centuries corresponded to a layer of débris of 5 metres; the settlement must have been small, the whole *tell* being 9-10 metres in height. But of course we lack any clue to make conclusions from this to the possible duration of the settlement at Jarmo, which is a one-period site and shows 7 metres of débris with 15 levels. I am thinking of the Babylon excavations, where the height of débris at 'Amrân was 21 metres, but at the Merkes area only 6 metres. These two amounts of rubbish thus are very different, and if the figures were to be used chronologically it would mean that the building area 'Amrân was more than three times as old as Merkes; but we dare not at all draw such a conclusion. There is no reason to believe that the Esagila-Etemenanki complex on 'Amrân should be older than Nebuchadnezzar's time, from which also the commercial quarter Merkes originates. The difference in the amount of débris must especially originate from the difference in the number of building bricks used in the two Neo-Babylonian quarters mentioned above. Probably this applies everywhere in Mesopotamia; therefore all calculations made in the individual place as to how many inches, feet, or metres of rubbish correspond to a decade or a century are without any actual interest.

¹ Sir Mortimer Wheeler, *Archaeology from the Earth* (1954), p. 45.

² *JRAS* 1937, p. 334.

³ *Chronology of the Shub-ad Culture* (1941), pp. 185-202.

A relative chronology must be made in the case of each excavation site after the conclusion of the work. In Mesopotamia the study of the changing kinds of pottery in trial-trenches are instructive in the case of the early and earliest periods from which no written documents are found; in historical times building customs, textual evidence, and the character of monumental as well as smaller objects found are decisive. Absolute figures may be obtained, if somewhere in historical times there is a fixed starting point to which may be attached positive evidence or well balanced estimates for periods older than the chronological starting point. In Mesopotamian chronology Hammurabi's reign has been such a starting point, and it is highly creditable to historical research that from 1884, when Th. G. Pinches¹ made the first chronological attempt on the basis of King List A, to the fifties of the present century, it has been tried, through incessant investigations, in recent years partly occasioned by and on the basis of the evidence of new-found texts, to attain to a fixing of the Hammurabi period in the most contradictionless chronological way.

In his important chronological reflexions the archaeologist has in the course of time obtained support through observations within other branches of science: dendrochronology (De Witt Clinton 1811, Ch. Babbage 1837); the fluorine test of buried bones (A. Carnot 1893, K. P. Oakley 1948), which in 1953 contributed to showing up the Piltdown hoax; Gerard de Geer's geochronological studies of the Swedish "varves", varved clay and sand deposits (1878, 1912, 1940); pollen analysis (Lennart von Post 1916, 1924, 1929); Cl. F. A. Schaeffer's chronological system (1948) based on "tremblement de terre", catastrophic earthquakes in Syria, Palestine, and Asia Minor; and Willard F. Libby's "Carbon 14" method (1946, 1949). By the last-mentioned method testing in the Geiger tube of samples of shells of land-mollusca and charcoal from Jarmo has given three absolute figures lying rather close to one another: 4758 B.C. \pm 320 years; 4654 B.C. \pm 340 years; and 4743 B.C. \pm 360 years. There is good reason to expect great things from Libby's method, which so temptingly gives the archaeologist absolute figures, but it should not be overlooked, at a critical scrutiny of all the radiocarbon dates published by Libby,² that a good number of these disagree with what down to 1952 was considered correct datings.

¹ *PSBA* VI (1884), pp. 193-98.

² *Radiocarbon Dating* (1952).

The interpretation is to be followed by the most important recording, perhaps the very most significant part of the excavation, as the publication very often in Mesopotamia as elsewhere is all that is left. Excavation in itself is destruction, and moreover the Mesopotamian climate affects the remains of walls and buildings not removed by the expedition but still found in situ, so that only a few years can wipe out the traces of the excavator's work, as was the case at Eridu, where the Iraqi Department of Antiquities in 1946-49 had excavations made. And in Babylon in 1951 very little was to be seen of the results of the German excavations from the period of 1899-1917, thus also at Kish.

In early times a method of recording arose in the flat alluvial river valleys of Egypt and Mesopotamia which, it is to be hoped, will soon have been abandoned. The idea presumably arose as a kind of compensation for an exact observation of the originally little controlled mass excavations and was expressed in a mechanical recording of every object and structure in relation to a fixed bench-level. Above, it has been pointed out that e. g. two potsherds from the same period may be excavated in different places of a town area at quite different depths owing to the fact that no Mesopotamian town area is level, therefore a datum-line system which substitutes so-called levels for factual stratification, whether these levels are abstract building levels or arbitrary depth lines, should in every respect be rejected. A deterrent example is from the French excavations at Susa, the Susa II horizon. Another weak point is the published sections in excavation publications as late as shortly before World War II; many of them give an impression as if they were addressed to the primitive reader through a daily newspaper. Petrie once said that in descriptive sciences the greatest importance should be attached to an account of the results on the plates of the book, but for this very reason we should not always be given a stone for bread.

As for the numbering, it is for good reasons natural that the layers or strata should be numbered from top to bottom, e. g. Warka 1-18, whereas inversely the cultures should be denoted from bottom, if this is reached, otherwise not, to top, e. g. Fara I-III. It is regrettable that such a standard numbering does not occur within the Mesopotamian area or within Iranian archaeology, but it should be kept in mind that the primarily certain factor alone is the excavator's ascertainment from top to bottom of a certain number of successive strata, whereas

research perhaps only after years, often under the influence of later excavations, will be able to synthesise this or that number of strata into a culture, perhaps even ascertain that each stratum represents a culture. Thus at Hassuna (1943-44) the occurrence of 15 levels has been ascertained, which have been denoted inversely of the natural excavation sequence, as mentioned above, with the figures Ia-XV from bottom to top. At Hassuna Level I seems to represent an early hunting culture, Ib-VI a coherent culture within which III-VI denote the prime; a change of pottery has been ascertained in Hassuna VI-XI, another in XI-XII, but so far we dare not speak about a change of culture. To this day we have with certainty only two Hassuna cultures: I (= Ia) and II (= Ib-VI); it will be up to future research to decide whether more may be pointed out.

As to exact recording of objects found during the excavations, Augustus Henry Lane Fox Pitt-Rivers, the founder of scientific archaeology, is a model to this very day. Lieutenant-General A. H. Lane Fox (1827-1900) according to the express wish stated in the will took the name of Pitt-Rivers when in 1880 he succeeded to the Rivers Estate (Wiltshire and Eastern Dorset). The extraordinary importance of military persons as the above-mentioned Colonel Stoffel, Lieutenant-Colonel Rawlinson, and Pitt-Rivers for archaeology should not wonder; the most careful accuracy, unexceptionable sense of order, keen senses, breadth of view, and adventurous courage are the higher officer's characteristics. Pitt-Rivers' magnum opus *Excavations in Cranborne Chase, near Rushmore, on the Borders of Dorset and Wills*. (1887-98, 4 vols.) is little known on the Continent and probably still less to Mesopotamian excavators, which is highly to be regretted, as very much can be learnt from the General's excavation methods, even though the present time has elaborated his purely technical procedures. By reading an anonymous English review of a report on excavations in the Indus valley, my interest in Pitt-Rivers was aroused a number of years ago, but not until 1948 was it possible for me thoroughly to study his *Excavations in Cranborne Chase* in the British Museum. This was a great experience and very instructive and useful for me when in 1951 I travelled to the Mesopotamian excavation sites and there at the same time had an opportunity to acquire more knowledge through conversations with Robert J. Braidwood during his conduction of the excavations at Jarmo. Pitt-Rivers' magnum opus in connexion with Sir Leonard

Woolley's archaeological publications,¹ Braidwood's papers² on the earliest village communities in Mesopotamia, Parrot's *Technique*³ and the brilliant archaeological methodology published by Sir Mortimer Wheeler⁴ in 1954 I consider every Mesopotamian archaeologist's obvious mental background and ballast before he begins to dig.

The very abundant funds which in the course of time have been placed at the disposal of the Mesopotamian excavators in connexion with the relatively cheap wages of the native workmen have encouraged wholesale mass-excavation so that an exact record has often been sacrificed on the altar of joy at the objects found, while at the same time the use of large labour forces have prevented the effective control so that not all finds are recorded with the greatest exactitude. Sir W. M. Flinders Petrie did not improve matters by paying his workmen on a piece-work basis; he explains⁵ that this form of pay "takes the smallest amount of attention. In detached small sites men may even be left unvisited for two or three days, merely reporting each evening how they have worked." In contrast to this Pitt-Rivers writes: "I had by ample experience been taught that no excavation ought ever to be permitted except under the immediate eye of a responsible and trustworthy superintendent"⁶ and "I never allowed it [i. e. the digging] to be carried on in my absence, always visiting the excavations at least three times a day and arranging to be sent for whenever anything of importance was found."⁷ In Pitt-Rivers' absence the most accurate supervision was made by a regular staff of assistants whom he had trained for their respective archaeological function, including supervision of the workmen.

The most accurate supervision of the labourers' digging is necessary in order that all finds can be put on record; for everything is to be

¹ We should especially mention *Digging up the Past* (1930, 1937, 1949) and the extraordinary archaeological and cultural results from the Tell 'Aṣṣhānah excavations, on which Woolley has published a preliminary report: *A Forgotten Kingdom* (1953).

² *The Near East and the Foundations for Civilization* (Eugene, Oregon 1952); *The Earliest Village Communities of Southwestern Asia* (in collaboration with Linda Braidwood) in the *Journal of World History* I (1953), pp. 278-310.

³ *Archéologie mésopotamienne* II (1953), pp. 11-103.

⁴ *Archaeology from the Earth* (1954).

⁵ *Methods and Aims in Archaeology* (1904), p. 29.

⁶ *Excavations in Cranborne Chase* I (1887), p. XVIII, quoted from Wheeler, *Archaeology* ... (1954), p. 14, as Pitt-Rivers' work is not found in the Royal Library, Copenhagen.

⁷ *Excavations in Cranborne Chase* I (1887), p. XVIII (Wheeler, *ibid.* p. 14).

described and catalogued, not only the new and interesting things: "Excavators, as a rule, record only those things which appear to them important at the time, but fresh problems in Archaeology and Anthropology are constantly arising, and it can hardly fail to have escaped the notice of anthropologists . . . that, on turning back to old accounts in search of evidence, the points which would have been most valuable have been passed over from being thought uninteresting at the time. Each detail should, therefore, be recorded in the manner most conducive to facility of reference . . ."¹ Every object found must be drawn according to Pitt-Rivers, who expresses these perfectly correct views of the proper meaning of the word "important" in connexion with excavations, and who further reinforces his above quoted words on the necessity of putting everything on record: "Everything has been drawn, down to the most minute fragment of pottery that had a pattern on it. Common things are of more importance than particular things, because they are more prevalent. I have always remembered a remark of Professor Huxley's in one of his addresses. 'The word 'importance','" he said, "ought to be struck out of scientific dictionaries; that which is important is that which is persistent." Common things vary in form, as the idea of them passes from place to place, and the date of them and of the places in which they are found may sometimes be determined by gradual variations of form. There is no knowing what may hereafter be found to be most interesting. Things apt to be overlooked may afterwards turn out to be of the greatest value in tracing the distribution of forms. This will be admitted when it is recognized that distribution is a necessary prelude to generalization."² These truisms of Pitt-Rivers' bear the hall-mark of genius.

Then how to record? If e. g. we take Sir Leonard Woolley's publication on the Royal Cemetery at Ur from 1934 or, from an extra-Mesopotamian area, Erich F. Schmidt's report on Tepe Hissar near Damghan (Iran) from 1937, we see in both reports, in "Tabular Analysis of Graves" and "Index of Burials", respectively, that both authors give the number and character of the objects found, but not their exact position in the respective graves only their depth metres. At the examination of a graveyard it is of the greatest importance to decide whether the burials overlap, indicating perhaps a culture-sequence, or they

¹ *Excavations in Cranborne Chase I* (1887), pp. XVI-XVII (Wheeler, *ibid.* p. 11).

² *Ibid.* IV (1898), pp. 27-28 (Wheeler, *ibid.* p. 183).

have been disturbed in antiquity. For these reasons the exact position of the grave objects may also be of great importance. This procedure with grave objects as well as all other objects found during the whole excavation, must be followed by the three-dimensional record. This is how Pitt-Rivers set to work at the excavation of Wor Barrow on Handley Down (Dorset) in 1893: objects found in the ditch-filling were recorded three-dimensionally and in the excavation report were plotted diagrammatically on the two schematic sections of the ditch. It was Pitt-Rivers' purpose, which he achieved, to record every object in such a way that it may be replaced exactly in its finding-place on the recorded plan and section. "That is the essence of three-dimensional recording, and three-dimensional recording is the essence of modern excavation."¹ Modern exact accomplishment of the three-dimensional record finds support in the consistent "pegging" of every excavated section.²

B. Characterisation.

§ 1. 1842-1917.

The space of time from the day in December 1842 when the excavations started to this day may be divided into three periods; we shall make the first of them end with Koldewey's abandonment of the expedition house of Babylon on 10.3.1917, but the German excavations had practically been discontinued in 1914. This first period has all the great splendour of adventure about it. The legendary countries of the Orient known to everybody through the biblical narratives emerge from the ruin mounds on the banks of the Euphrates and the Tigris, with infinite toil and moil wrenched from the soil by enthusiastic, strong personalities.

The excavations at Khorsabad, Nimrud, and Kuyunjik during the period from 1842 to 1855 presented Assyrian culture and history in the widest sense of the words to research and the public and at the same time through the rich findings of cuneiform texts gave us a reconnaissance of the culture of Babylonia in the widest sense as well. This was Botta, Layard, Place, and Rassam's achievement. Their findings

¹ Wheeler, *Archaeology from the Earth* (1954), p. 14.

² See further Wheeler, *ibid.* pp. 68-71.

constitute the unshakeable foundation on which all our knowledge of Assyro-Babylonian culture is based. Never since has such a treasure of statues and monumental sculptures and reliefs been transferred to the museums of Europe, and it may be added that the number of monumental inscriptions and cuneiform tablets found in the earth from the period 1842–1917 surpasses all the finds of later times. As to the former, Khorsabad, Nimrûd, and Kuyunjik are the radiant names, while a total number of more than 100,000 cuneiform tablets originate alone from Kuyunjik, Sippar, and Nippur. The overwhelmingly great material of texts made it possible to obtain insight into Assyro-Babylonian history, chronology, religion, literature, science, everyday life as well as agriculture and commerce. And through the later large-scale German excavations at Babylon and Assur by Koldewey and Andrae, respectively, we got much insight into the aspect of the towns in ancient Mesopotamia and of palaces and temples. We have now a knowledge of the character of four Assyrian capitals, the oldest being Assur, the next being the new capital Kalḫu (Kalah), Nimrûd, founded by Shalmaneser I c. 1280 B.C., which was not until some time after 710 succeeded by Sargon's splendid Dûr-Sharrukîn, which Sennacherib (705–681) replaced by Nineveh (Kuyunjik). In the southern kingdom considerable parts of the only great town there after the Hammurabi period, the capital Babylon itself, were uncovered in the form of grandiose building remains. It was now possible to be present at the Sovereign Kings' reception of foreign nations' envoys in the audience room of the palace and through the King's correspondence with the officials of the realm to follow certain details within the State management; it was possible through the inscriptions of the Assyrian kings to accompany the army during the campaigns and obtain a clear insight into the equipment and units of the army; it was possible through the texts to follow the everyday life of the farmers or enter the townsman's house, and with him take part in the religious festivals. And extraordinarily rich findings of scholastic texts enable science to establish the insight into the Assyro-Babylonian language on a secure basis, as expressed in grammars and dictionaries.

Four supplementary extra-Mesopotamian findings of Assyro-Babylonian cuneiform texts of the very greatest importance for this excavation period are to be mentioned, viz. those of: the Assyrian texts

from Cappadocia (Kül Tepe),¹ the Amarna letters,² Hammurabi's law stele,³ and the Assyro-Babylonian Boghazkeui texts.⁴

Though the revival of the ancient Semitic culture on the Euphrates and the Tigris might seem sufficient and would give research much more work than it could manage, this excavation period brought another great and strange gift to science: the Sumerians. Quite another people than the Semitic Assyrians and Babylonians emerged from the ruin mounds of the old Lagash, when Ernest de Sarzec, from 1875 French vice-consul at Basrah, had achieved the three first (of his eleven) campaigns at Telloh during the period from 1877 to 1881. A large excavation yield of statues, a fragment of a stele, statuettes, bronze figurines, vases, and inscriptions were after May 1881 to be inspected by scholars in the Louvre. Jules Oppert at the meeting on 2.12.1881 in the Académie des Inscriptions et Belles-Lettres rightly said: "depuis les découvertes de Ninive et de Babylone, la découverte de M. de Sarzec est la plus précieuse que l'on ait faite en Mésopotamie".⁵

As early as 1852 Rawlinson with the clear-sightedness of genius at the study of the Assyrian syllabaries from Ashurbanipal's Library had laid down that the cuneiform tablets also contained texts written in a non-Semitic language (see above Ch. III § 10 and § 9 pp. 163 f.); about the turn of the century Sumerian had been adopted as the name of the language; but pictures of the Sumerians themselves were not seen until de Sarzec's statues and reliefs were brought to light. They were a different type from that of the Assyrians and Babylonians: small,

¹ Th. G. Pinches, *PSBA* IV (1882), pp. 11-18; A. H. Sayce, *PSBA* VI (1884), pp. 17-25; W. Golénischeff, *24 tablettes cappadociennes de la collection W. Golénischeff* (1891); Fr. Delitzsch, *Beiträge zur Entzifferung der kappad. Keilschrifttafeln* (1894; *Abhdl. d. K. Sachs. Ges. d. W.* XIV). But only after the end of World War I the number of texts was so great that the scholars (especially J. Lewy) obtained decisive results. Fr. Hrozný, who was leader of the Czechoslovak expedition to Kül Tepe (Kanesh) in 1925, increased the number of texts. Important text editions by G. Contenau (1919, 1920), Sidney Smith (1921-27), and Fr. Hrozný (1952). Cp. also above pp. 208 and 218.¹

² Found in Upper Egypt 1887, edited by H. Winckler and L. Abel 1889-90; E. A. W. Budge 1892; O. Schroeder 1914 (*VS* XI-XII); see also C. Bezold, *Oriental Diplomacy* (1893) and J. A. Knudtzon 1915 (*VAB* II).

³ Found at Susa 1901 by J. de Morgan's French expedition, edited by V. Schell, *Textes élam.-sém.* II (1902; *Mém. Délég. en Perse* IV); R. F. Harper 1904; A. Ungnad 1909; and A. Deltiel 1910 (3. ed. by E. Bergmann 1953).

⁴ From H. Winckler's rich archival finds at Boghazkeul in 1906 two volumes of cuneiform texts were edited in this period by H. H. Figulla and E. F. Weidner (1910; *WVDOG* XXX).

⁵ *Comptes-rendus de l'Acad. des Inscr.* 4 sér., t. IX (1882), p. 231.

thickset people whose large noses with a straight and sharp ridge mark the total impression of them; the mouth is small with thin lips, the eyebrows show large, regular arches; most Sumerians, who all seem to have a predisposition to fatness, shaved off both beard and hair. Their inscriptions showed that they used the Assyro-Babylonian cuneiform script in an archaic form; but their language was quite different. It was eagerly discussed and studied; but no profound insight into it was obtained until the 20th century. The great American excavations at Nippur with interruptions during the time from 1889 to 1900 may be said to have supplemented the knowledge about the Sumerians obtained through de Sarzec's findings at Telloh, as amongst the about 35,000 cuneiform tablets of the temple archives there were a great many Sumerian texts, besides the fact that excavations in the temple area of the Enlil ziggurat E-kur gave the investigators the first glimpses of Sumerian sacral architecture. If we add the Sumerian texts from Telloh to the finds from Nippur, it may safely be said that the Sumeriology that is to be, through the excavations during the period 1842-1917 became possessed of the main part of the material of texts on which it is based, linguistically and factually; since then so great findings of Sumerian linguistic evidence have not been made; 75 per cent. of what we possess of Sumerian texts to this day originate from Lagash and Nippur.

One more scientific finding of the greatest value was made during the period from 1842 to 1917. Nobody understood its scope at the time, at it was pardonable that painted pottery, often in a fragmentary state, could not possibly be paralleled to the meeting of research with Assyro-Babylonians and Sumerians and their art treasures, palaces, temples, and inscriptions. But after 1918 the interest in the painted pottery was to increase and finally almost to dominate Mesopotamian archaeology. In May 1911 Ernst Herzfeld at Samarra, which is situated almost on the southern frontier of ancient Assyria, under Islamic houses found a prehistoric graveyard the culture of which was characterised by painted pottery. The final publication is dated at 1930, but even if it had been issued immediately after the finding the time was hardly ripe for our understanding of the importance of it; the conditions of increasing insight only began arising in April 1918, as we shall see below.

§ 2. 1918-1939.

This excavation period is characterised by two things: the understanding of and insight into Sumerian culture and history, the centres of the various main city-states being excavated and studied, supplementing the knowledge which had been given to research by the city-state of Lagash and the sacral centre of Nippur; and as a result of depth diggings in Sumerian as well as Assyrian areas in connexion with the pottery wares found there, an increasing interest in the scriptless prehistory of Mesopotamia arose. While the results from the Sumerian city-states added positive knowledge to what had up to 1918 been known about Sumerian culture, the prehistoric finds were still unable to have a more than guiding effect as regards the increasing knowledge of the following period.

The important finding-places as regards Sumerian city-state culture, are Tell Al 'Ubaid, Ur, Kish, Telloh, Uruk, Tell Asmar, and Khafājah in Babylonia, Nuzu and Tepe Gawra in Assyria. Building remains of temples and ziggurats (Ur, Kish, Uruk) were uncovered everywhere, grave findings of the greatest importance and findings of golden riches were made at Ur and in part also, on a modest scale, at Kish; from Tell Al 'Ubaid originate finds of temple ornaments, from Tell Asmar and Khafājah findings of statuettes, at that time (1933-34) unique. Findings of Sumerian texts were not made by ten thousands, but in return research became possessed of a number of archaic texts which gave new glimpses of the earliest Sumerian linguistic type and its script. These texts are of different age; the earliest are those from Uruk (total number of texts from all periods about 3000 in a non-fragmentary condition), next follow in a chronological order those from Jemdet Nasr, Ur, and Fara. The greatest collected finding of cuneiform tablets was made at Nuzu (c. 3000 from the time after the 15. century). As a result of this grandiose excavation activity it may be pointed out that research at the time about the outbreak of World War II had acquired the basis of an insight into Sumerian culture parallel to the knowledge which the preceding period had acquired as a result of the Assyrian and Babylonian excavations. The period from 1918 to 1939 was of course much shorter than the preceding period, in which scholars had succeeded in working up great parts of the uncovered material as well as that found in the earth, but a brilliant start had been made towards a detailed insight into the culture of the Sumerian city-states.

The resumption of excavations on Botta's and Layard's old hunting grounds, Khorsabad and Kuyunjik, occurred in this period, also with excellent results, and as an extra profit yielded the important excavation find of Sennacherib's Jerwân aqueduct. The finds of texts were of less bulk, but included important historical information.

The greatest collected finding of cuneiform texts in this period was made out of Mesopotamia, viz. at Mari in Syria on the lower course of the Euphrates, as between 23,000 and 24,000 cuneiform tablets were found in the palace archives in the years 1935-37. The contents of these were of course mainly connected with the economy and history of the Mari state, amongst other things expressed in a diplomatic correspondence in the form of letters; but the information of the texts was of the greatest importance for our understanding of the history of the Near and Middle East and has contributed to a revision of the Hammurabi chronology. At the same time it should be emphasised that the excavations at Mari under the leadership of André Parrot since 14.12.1933 and continued after World War II (10th campaign: October-December 1954), has been an extremely important supplement to the insight into the culture of the Sumerian city-states mentioned above and acquired on Mesopotamian soil. Sargon of Agade, who founded the rule of the Semitic Kishites over the Sumerian city-states, as well as his successors, as often happens to conquerors, was soon assimilated by Sumerian culture, so that his conquest in the third year (2301) of his reign over Mari caused the transfer of Sumerian culture to this new strategic garrison city of Sargon (and Naram-Sin); Hammurabi put an end to the Sumerian city-state Mari in the 35th year of his reign (1758).—Another, smaller, but important extra-Mesopotamian cuneiform text finding was made by Sir Leonard Woolley at Tell 'Aṣṣhānah (1936-39), where several hundred tablets were found.

Knowledge of the prehistory of Mesopotamia, based only on changes of pottery and modest remains of buildings in which still more modest findings of objects of any kind were made, was acquired either consciously through deep-dug trial-pits (Ur, Kish, Tellōh, Kuyunjik) or was the result of more comprehensive deep excavations within temple or settlement areas (Uruk, Tepe Gawra, Tell Asmar, Khafājah). The inspiration originated in part from the findings of painted pottery of various kinds made by the excavators during their digging, first made as surface findings on Abū Shahrain in April 1918 by R. Campbell

Thompson, previous assistant to the Department of Egyptian and Assyrian Antiquities of the British Museum, Captain in the British Intelligence Service. At that time Mosul in the north was still occupied by German-Turkish troops, even though General Maude's entry into Baghdad (11.3.1917) in practice meant the conquest of Mesopotamia from the Turks. Campbell Thompson's coloured potsherds were soon after found to occur in large amounts at Tell Al 'Ubaid, from where the name for this pottery originates. The finding-places of Ur and Uruk supplemented the observations made, and on the basis of changes of pottery from the various strata excavated in the three last-mentioned finding-places, research, with H. Frankfort's book¹ on the different Mesopotamian pottery wares and their interrelations as its starting point, established a prehistoric sequence that was supposed to cover three different cultures, which were designated by the names of Ubaid, Uruk, and Jemdet Nasr, Ubaid denoting the oldest pottery culture. Woolley's digging of a deep shaft at Ur in the season of 1929-30, the so-called Flood Pit, 60 feet deep and supplemented during the following campaigns by two other test pits secured the above-mentioned pottery sequence, which at the 18. International Congress of Orientalists at Leiden in 1931 was legitimated: the three names were to be used for the three prehistoric periods in Mesopotamia.

The weakness of this proposition was that only South Mesopotamian material entered into the argumentation, but to begin with, after 1931, the investigators were mainly occupied partly by unravelling the relation between Sumerians and Semites on the one hand and the pottery periods ascertained on the other, partly by getting to the bottom of the question of the interrelations between the Mesopotamian kinds of painted pottery and that of the Syrian Tell Halaf in the west and the two Susian wares in the east. But soon findings in the north, within the area of the old Assyrian realm, from the original starting point of the excavations, the Mosul region, were to give a warning, even though a deeper understanding was only allotted to the next excavation period.

From the north originate from this excavation period three important finds, which form the starting point for the prehistoric investigations and excavations of the next period. Soon after the above-mentioned Leiden Congress in 1931 had established the three prehistoric cultures, two things were ascertained at Kuyunjik. In the first place, complete

¹ *Studies in Early Pottery of the Near East* 1-11 (1924-27).

absence of the Ubaid pottery and the finding of a kind of pottery previously unknown in Mesopotamia (Nineveh 1 and 2a): a slightly greyish kind of earthenware, badly burnt and of a coarse kind, undecorated, unpolished, with scratched patterns. These were the results in the season of 1931-32 of M. E. L. Mallowan's digging of 27.5 m deep shafts on an area of 20×16 m beside the northwest side of the Ishtar temple at Kuyunjik, by which the excavators got down to 4 m above water level. Furthermore Mallowan in February-April 1933 by excavations at Tell Arpachiyah about three miles northeast of Kuyunjik found extremely beautifully decorated coloured pottery of the Syrian Tell Halaf type. Both of Mallowan's finds of pottery excited admiration and wonder, the latter because Nineveh 1 and 2a could not be correlated with experience from the pottery sequence of South Mesopotamia. But the Tell Arpachiyah pottery gave food for thought, and at the same time the last prehistoric cultural period, Jemdet Nasr, in the light of the excavations at Uruk and Tepe Gawra, seemed to be shaky.

The contrast between north and south was emphasised still more through Dorothy A. E. Garrod's investigations in 1928, which were published in 1930,¹ but it may probably be said that these aroused little interest and during the period 1918-39 only exerted influence on American prehistorians as an inspiring stimulus. During the excavations at Tell Al 'Ubaid, Kish, Ur (PG 755) as well as Telloh, neolithic flint implements had been found, but the learned prehistorian, who in Palestine in Mount Carmel's caves, had found the Natufian Mesolithic, ascertained the occurrence of a Palaeolithic in the southeastern Kurdistan, in two caves Zarzi and Hazer Merd within the frontier area of the Iraqi state. In the next period this extremely important discovery was to be very fruitful.

Other extra-Mesopotamian excavations of great importance for our knowledge of the culture of the Sumerian city-states parallel to the Mari finds, as well as for prehistoric reflexions, are Mallowan's excavations in the Habur area, viz. at Chagar Bazar (1935-37) and Tell Brak (1937-39), where amongst other things Naram-Sin's large palace was found. Especially in the former excavation site cuneiform tablets were excavated.

¹ *The Palaeolithic of Southern Kurdistan (Bulletin of the American School of Prehistoric Research VI (1930), pp. 13-23).*

§ 3. 1939 ff.

While the first period was dominated by the Assyrians and the Babylonians and gave an overwhelming impression of Sumerian culture, the idea of the second period was the development of our understanding of the Sumerians. Simultaneously with the acquisition of this understanding through the work of the great excavation expeditions, prehistoric speculations arose, into which the investigators were driven through different finds of pottery and the deep strata reached at Uruk and Tepe Gawra. The last period, which was started during World War II by the young energetic Department of Antiquities, Baghdad, with Seton Lloyd as archaeological adviser and after his departure on 1.1.1949 to Istanbul with the skilled and masterful H. E. Dr. Naji al-Aşil as Director-General of Antiquities, has no common stamp, and when the Americans and the English in the years 1948 and 1949, respectively, resumed their excavations in Iraq the interest and choice of subjects of the expeditions hit on widely different Mesopotamian cultural areas. Therefore it is not possible to characterise the period after 1939 apart from stating that the work proceeds in various areas and in this way creates possibilities of obtaining new insight and supplements to our previous knowledge, or perhaps corrects it. But at the same time it is as if we begin dimly to see a pattern as regards Mesopotamian prehistory. In recent years it has been elaborated and at the same time has proved to be more complicated than as viewed during the period 1918-39, but it seems that clearer insight has been gained and more solid clues are available than previously.

Significant new finding-places and earlier excavation areas where digging has been re-opened from this period are, classified and within the classes arranged chronologically, as follows: Prehistory has been elucidated by the excavations at Grai Resh (1939); Tell 'Uşair (1940, 1941); Tell Hassuna (1943, 1944); Eridu (1946-49); Matarrah (1948); Jarmo (1948, 1950-51); the Maklûmur area, the plain between the Greater and Lesser Zâb (1948); Barda Balka (1949, 1951); Baradost (1950); Karîm Shahr (1951); Palegawra (1951); Shanidar (1951, 1953).—The Sumerian city-state culture has been elucidated by the excavations at Tell 'Uşair (1940, 1941); Tell Abû Hârmal (1945-49), and Nippur (20.11.1948 ff.), while at 'Aşar Kûf (1942-5) the ziggurat and palaces of the Kassite capital Dûr-Kurigalzu have been excavated. Since March 1949 comprehensive excavations at Nimrûd have provided new know-

ledge of Ashurnasirpal's, Adad-nirâri II's, and Sargon II's times; among the objects found may be mentioned a collection of unique ivories. Findings of cuneiform tablets have been made at Dêr (300 in 1941), Tell Abû Harmal (c. 2400 extremely valuable texts), and at Nippur from 1952 on by thousands at the house of a scribes' school, whereas on the "Tablet Hill" so far few, but important texts have been found. At Nimrûd more than 200 tablets have been excavated.

Among extra-Mesopotamian findings of importance for the elucidation of Mesopotamian culture the following are to be mentioned: for prehistory the Baghouz finding of painted pottery (1935, 1936; published 1948). Moreover, everybody who wants to gain insight into Mesopotamian prehistory must be acquainted with finds from and excavations in areas partly west of Mesopotamia, such as Mersin, Ras Shamra, Sakje Geuzi, 'Amuq, Jericho, Carehemish, Tell Halaf, partly east of Mesopotamia: Bakun, Chasimah Ali, Sialk, Giyan, and Hissar. For supplementary insight into Assyro-Babylonian history and culture the new great findings of tablets at Mari should be mentioned (in 1953 about 10,000 tablets).

In a following chapter the large number of problems of Mesopotamian prehistory will be taken up for further discussion. In this place it is only to be pointed out that while the work during the first period was done in the Assyrian north and mainly was concentrated on the palaces and achievements of the kings of Assyria, the text material found makes it an established fact that Babylonia in the south was the cultural centre. Ernest de Sarzee's ascertainment of the existence of the Sumerian princes in Telloh in the south corroborated this fact, especially considering that the immigrated Babylonians had taken over or borrowed from Sumerian culture. In the period of 1918-39 the whole importance therefore was attached to the investigation of southern Babylonia, the established political centre of the Sumerians. The period starting in 1939 has not been able to shake the facts mentioned above, but the result of this excavation period is that northern Mesopotamia is realised to have been the place where the first inhabitants of the country lived. There the first, in part agricultural, community arose; there we find the beginning of the culture and history of Mesopotamia. There is no more doubt, now, that the first movements of people were onesidedly from north to south. Now the problems of the interrelations are urgent: the relations of Mesopotamia to Iran and to Syria in prehistoric times,

the question what is loans and which is indigenous in Mesopotamia. Furthermore, what does the west or the east owe to the influence from the first cultural period, which started in the Northeast Assyrian area? Or are we faced with an interrelationship as regards the three units mentioned? Our knowledge has increased since H. Frankfort in 1924 published the first volume of his above-mentioned book, but the difficulties are still very great. First of all the investigator must have the final publications from the excavation sites at his disposal; the great demands now made on the recording of excavations preclude that one for a very short time after the conclusion of even a small excavation may expect any detailed documentation from the preliminary reports, and must content oneself with the very useful articles in *The Illustrated London News*. Thus four years passed between the Matarrah excavation and the Braidwoods' for that matter exemplary publication and evaluation of the results. Finally, it should not be forgotten that the character of the world situation to this day in accordance with the unfinished course of World War II does not give possibilities of such large grants from governments, institutions, or private persons as those which made the large-scale excavations in the preceding excavation period possible.

C. Chronological List of Excavation Sites.

The numbered list below of all localities known to me where excavations have taken place in Mesopotamia within a period of 113 years, 1942-1954, is chronological, for the individual sites of excavation, too, but in their chronological place in the list references are made to the localities (e.g. Khorsabad, Nimrūd, Kuyunjik, Telloh), where excavations have been made at intervals of years or longer periods. If several excavations have been made within the same year the chronological order within that year is determined by the date when the excavations began, if known. After each consecutive number follows: (1) the year and the name of the site of excavation in its earliest known form, with the ancient Sumerian or Assyro-Babylonian name in parenthesis; (2) the date in year, month, and day, if possible; (3) the leader of the excavations with the staff or chief members of it in parenthesis (square brackets); (4) the government, institution or private individual (or private foundation) that has sent out and defrayed the expenses of the expedition; (5) the chief results of the excavations; (6) and finally the chief publications,

- e.g. 129. 1933. KÅŞR SHEMÂMOK (Kakzu).
 February–April 1933.
 Giuseppe Furlani. [Doro Levi, Fausto Franco].
 Missione Archeologica Italiana di Mesopotamia.
 Assyrian building ruins; Parthian necropolis.
 G. Furlani, *Gli scavi italiani in Assiria (Campagna del 1933)* (*Giornale della Società Asiatica Italiana* N. S. II (1934), pp. 265–76).

The difficulties with which the establishing of a strictly chronological order in the 19th century has been beset are due to the great reticence of e. g. Layard, Loftus, and Taylor in the mention of years, let alone precise dates, while Rassam often gives definite dates but never the year. My chronological order is based on a great deal of work, amongst other things because much of the information given in earlier accounts of the history of the excavations had to be revised.

Since the number of native workmen is only known from a limited number of excavation sites (see above pp. 297–98) it is not stated in the list. No distinction has been made between excavations made partly in northern partly in southern Mesopotamia; while it may be of interest in connection with what was stated above concerning the cultural difference between the north and the south from prehistory to historical times, this distinction is in our opinion irrelevant to the course of the excavations themselves.

The 162 numbers of the list correspond to 63 different excavation sites within one hundred years, 99 of the numbers being references, an impressive number when we consider the countless difficulties and the enormous size of certain sites (e. g. Kuyunjik, Nippur, Babylon). But much work lies ahead waiting to be done, even though very considerable ancient sites have been partly excavated; in 1945 the Department of Antiquities, Baghdad, estimated the number of *tulâl* containing ancient sites at 2886.

For an index to the list of the excavated sites, giving the chronological number, see below pp. 383–84.

1. 1842. KUYÛNJIK (Nineveh).
 December 1842–February 1843.
 P. É. Botta.
 Trial digging without results.

2. 1843. KHORSABAD (Dûr-Sharrukin).

20.3.1843–October 1844 (the excavations closed during the winter 1843–44, see above p. 272).

P. É. Botta. [Draftsman May–October 1844: E. N. Flandin]. The French Government (Louvre, Paris).

Partial excavation of the Palace; reliefs; sculptures; inscriptions.

Lettres de M. Botta sur ses découvertes à Khorsabad près de Ninive, publiées par J. Mohl (1845), an offprint from *Journal Asiatique* 1843–45.—*Monument de Ninive découvert et décrit* par M. P.-É. Botta, mesuré et dessiné par M. E. Flandin (1849–50, 5 vols.).

12.1.1852–April 1855.

Victor Place. [Draftsman 14.3.1853 ff.: Félix Thomas].

The French Government (Louvre, Paris). Cf. also p. 290. Excavation of the Palace. Parts of the City Wall.

V. Place, *Ninive et l'Assyrie*, avec des essais de restauration par Félix Thomas (1867–70, 3 vols.).

1929 (early)–May 1935.

E. Chiera (1929); H. Frankfort (1930–April 1932); Gordon Loud (November 1932–May 1935). [P. Delougaz, S. Lloyd, H. D. Darby, Ch. Altman; epigraphist: Th. Jacobsen].

Assyrian Expedition (The Oriental Institute, Chicago) 1929; Iraq Expedition (The Oriental Institute, Chicago) 1930–35.

The Citadel and its gates, the Palace of Sargon, its temples, inscriptions, cuneiform tablets (e.g. the Khorsabad King List), statues, reliefs, ivories.

Henri Frankfort, *OIC* 16 (1933), 17 (1934), 19 (1935), and 20 (1936).—Gordon Loud, *Khorsabad. I. Excavations in the Palace and at a City Gate* . . . (1936; *OIP* XXXVIII).—Gordon Loud and Charles B. Altman, *Khorsabad. II. The Citadel and the Town* (1938; *OIP* XL).

3. 1845. NIMRÛD (Kalhu, Kalah).

9.11.1845–24.6.1847. Cf. above pp. 272–73.

A. H. Layard. [Agent and overseer from the middle of February 1846: Hormuzd Rassam].

Sir Stratford Canning; Spring 1846 ff.: The British Government (British Museum).

Ashurnāṣirpal II's Northwest Palace; Adad-nirāri III's Palace; Tiglathpileser III's Central Palace, on the site of which Shalmaneser III's Black Obelisk was found; Esarhaddon's Southwest Palace; sculptures, reliefs, inscriptions.

A. H. Layard, *Nineveh and its Remains* (1848-49, 2 vols.).
 -A. H. Layard, *The Monuments of Nineveh from Drawings made on the Spot. 1. Series* (1849).

Autumn 1849-Autumn 1850.

A. H. Layard. [H. Rassam].

British Museum.

The ziggurat; Ashurnāṣirpal II's Temple.

A. H. Layard, *Discoveries in the Ruins of Nineveh and Babylon . . . being the Result of a Second Expedition . . .* (1853).-A. H. Layard, *The Monuments of Nineveh . . . A Second Series . . .* (1853).

1852 (close of the year)-March 1854.

H. Rassam. [Draftsman: Ch. D. Hodder].

British Museum.

The Nabû Temple; statues of Nabû; Shamshi-Adad V's stele.

H. Rassam, *Asshur and the Land of Nimrod* (1897).

21.4.1854-1855.

W. K. Loftus (21.4.-July 1854); H. C. Rawlinson (July 1854 ff.). [Draftsman: W. Boutcher].

Assyrian Exploration Fund, London (21.4.-July 1854);
 British Museum (July 1854 ff.).

Report of the Assyrian Excavation Fund, February 20, 1855 (containing W. K. Loftus' reports dated 28.8.-4.12.1854), see C. J. Gadd, *The Stones of Assyria . . .* (1936), Appendix pp. 4, 9.

9.4.-7.5.1873.

George Smith.

The Daily Telegraph, London.

G. Smith, *Assyrian Discoveries. An Account of Exploration and Discoveries on the Site of Nineveh, during 1873 and 1874* (1875).

7.1.-17.5.1878; 16.11.1878-January 1879; 27.9.-11.11.1880.

H. Rassam. [Nimrud Rassam].

British Museum.

H. Rassam, *Asshur and the Land of Nimrod* (1897).

1949 (March) ff.

M. E. L. Mallowan. [R. W. Hamilton, J. H. Reid; epigraphists: Barbara Parker, D. J. Wiseman, C. J. Gadd (the 4. season)].

British School of Archaeology in Iraq, supported by the Metropolitan Museum of Art, New York; the Ashmolean Museum and Griffith Institute, Oxford; Cambridge University; the City Museum and Art Gallery of Birmingham; the Australian Institute of Archaeology, Melbourne; University of Durham; Penguin Books, Ltd.; the Iraq Petroleum Company.

Ashurnasirpal II's Northwest Palace (the southwestern wing); Adad-nirâri III's and Sargon II's palaces; cuneiform tablets; inscriptions, ivories.

M. E. L. Mallowan, *Excavations at Nimrud (Kalhu) 1949-50; 1951; 1952; 1953 (Iraq XII-XVI, 1950-54)*.

4. 1846. BAASHEIKA = TELL BILLAH (Shibaniba).

Previous to 17.1.1846.

A. H. Layard.

Sir Stratford Canning.

"Several trenches had been opened in the great mound of Baasheiba; and fragments of sculpture and inscribed bricks, had been discovered there."

A. H. Layard, *Nineveh and its Remains* I (1848), p. 52.

October 1930-1931; winters of 1931-32, 1932-33, 1934-35.

E. A. Speiser; Charles Bache (from the autumn of 1932). [S. N. Kramer, Cl. Fisher].

The American School of Oriental Research, Baghdad and the Museum of the University of Pennsylvania.

Hurritic settlements from the middle of the 2. millennium; Billah Pottery.

E. A. Speiser and Charles Bache in *BASOR* 40 ff. (1930 ff.).
 –E. A. Speiser, *The Pottery of Tell Billa* (*MJ* XXIII (1932), pp. 249–308).—Charles Bache, *The first Assyrian Level at Tell Billa* (*MJ* XXIV (1935), pp. 33–48).

5. 1846. KUYÛNJIK (Nineveh).

1846 (late spring).

A. H. Layard. [H. Rassam].

British Museum.

The City Wall to the Northwest with the Nergal Gate;
 two *lamasâti*.

A. H. Layard, *Nineveh and its Remains* (1848–49).

15.5.–24.6.1847.

A. H. Layard. [H. Rassam].

British Museum.

Sennacherib's S. W. Palace.

A. H. Layard, *Nineveh* . . . (1848–49).

After the departure of Layard the excavations were continued on a small scale under the leadership of H. J. Ross and Christian Rassam.

12.10.1849–28.4. 1851.

A. H. Layard. [H. Rassam; draftsmen: F. Cooper and T. S. Bell].

British Museum.

Sennacherib's Palace: "71 halls, chambers, and passages", "27 portals, formed by colossal winged bulls and lion-sphinxes," "9880 feet of bas-reliefs"; parts of Ashurbanipal's Library (mostly broken tablets).

A. H. Layard, *Discoveries in the Ruins of Nineveh and Babylon* . . . (1853).—A. H. Layard, *The Monuments of Nineveh* . . . A *Second Series* . . . (1853).—C. J. Gadd, *A Visiting Artist* [i. e. Solomon Caesar Malan] *at Nineveh in 1850* (*Iraq* V (1938), pp. 118–22).

1852 (close of the year)—March 1854.

H. C. Rawlinson (see above pp. 290 ff.). [Field-director: H. Rassam, draftsman: Ch. D. Hodder].

British Museum.

Ashurbanipal's North Palace: the Lion-Hunt and the rest of Ashurbanipal's Library (well preserved; in all c. 25,000 tablets including Layard's part from Sennacherib's Palace).

H. Rassam, *Asshur and the Land of Nimrod* (1897).

21.4.1854–1855 (middle of the year).

W. K. Loftus (21.4.–July 1854); H. C. Rawlinson (July 1854 ff.) [Draftsman: W. Boutcher].

Assyrian Exploration Fund, London (21.4.–July 1854); British Museum (July 1854 ff.).

Ashurbanipal's Palace: the hunting-sculptures, plan of the palace.

Report of the Assyrian Excavation Fund, February 20, 1855 (containing W. K. Loftus' reports dated 28.8.–4.12. 1854), see C. J. Gadd, *The Stones of Assyria* . . . (1936), Appendix.—H. Rassam, *Asshur* . . . (1897), Plans I and II.

7.5.–9.6.1873.

George Smith.

The Daily Telegraph, London.

Cuneiform tablets from Ashurbanipal's Library (3 fragments of the Deluge Story: Gilgamesh Epic XI. Tablet); inscriptions of Esarhaddon, Ashurbanipal, and Sennacherib.

G. Smith *Assyrian Discoveries* . . . (1875).

1.1.–12.3.1874.

George Smith.

British Museum.

From Ashurbanipal's Library c. 3000 cuneiform tablets. G. Smith, *Assyrian Discoveries* . . . (1875).

7.1.–17.5.1878; 16.11.1878–January 1879; 27.9.–11.11. 1880.

H. Rassam. [Nimrud Rassam].

British Museum.

Sennacherib's and Ashurbanipal's palaces; c. 2000 cuneiform tablets.

H. Rassam, *Asshur* . . . (1897).

1888-89 (winter), 1890-91 (winter).

E. A. Wallis Budge.

British Museum.

The southwest and northwest part of the mound; cuneiform tablets (c. 300).

E. A. Wallis Budge, *By Nile and Tigris* (1920, 2 vols.).

3.3.1903-11.2.1905.

L. W. King; R. Campbell Thompson (22.6.1904 ff.).

British Museum.

The Nabû Temple, three Assyrian strata; c. 800 cuneiform tablets.

R. Campbell Thompson and R. W. Hutchinson, *A Century of Exploration at Nineveh* (1929).

1927-1932.

R. Campbell Thompson. [R. W. Hutchinson 1927-30, R. W. Hamilton 1930-32, M. E. L. Mallowan 1931-32].

British Museum, supported by the Percy Sladen Memorial Fund, Oxford; the Merton College, Oxford; the Society of Antiquaries, London; O. C. Raphael; Eleanor Hull; Sir Charles Hyde.

The Nabû Temple south of the North Palace; on its southeastern site Ashurnasirpal II's (?) Palace; historical inscriptions (Tiglathpileser I, Adad-nirâri II); the Ishtar Temple from the 2. millennium rebuilt under Ashurbanipal; Sennacherib's Palace; shaft digging: Nineveh 1 and 2 a pottery.

R. Campbell Thompson and R. W. Hutchinson, *A Century of Exploration at Nineveh* (1929).—R. C. Thompson and R. W. Hutchinson, *The Excavations on the Temple of Nabu at Nineveh* (*Archaeologia* LXXIX (1929), pp. 103-48).—R. C. Thompson and R. W. Hutchinson, *The Site of the Palace of Ashurnasirpal at Nineveh, excavated in 1929-30* (*AAA* XVIII (1931), pp. 79-112).—R. C. Thompson and R. W. Hamilton, *The British Museum Excavations on the Temple of Ishtar at Nineveh, 1930-31* (*AAA* XIX (1932), pp. 55-116).—R. C. Thompson and M. E. L. Mallowan, *The British Museum Excavations at Nineveh*,

1931-32 (AAA XX (1933), pp. 71 ff.).—M. E. L. Mallo-
wan, *The Prehistoric Sondage of Nineveh* (AAA XX
(1933), pp. 127-77).—R. C. Thompson, *The Buildings
on Quyunjik, the Larger Mound of Nineveh* (Iraq I
(1934), pp. 95-104).

6. 1847. KĀL'AT SHARKĀT (Assur).

1847 (beginning of the year).

A. H. Layard. [H. Rassam].

British Museum.

Shalmaneser III's seated statue.

A. H. Layard, *Nineveh . . . II* (1849), pp. 45 ff.

19.12.1850–April 1851 (the exact date cannot be established).

A. H. Layard. [H. Rassam].

British Museum.

Tiglathpileser I's prism inscription (two fragments).

A. H. Layard, *Discoveries . . .* (1853), pp. 581-82.

1851-1852 (winter.)

Victor Place.

The French Government (Louvre, Paris).

1853 (twice, but the exact dates cannot be fixed).

H. C. Rawlinson. [H. Rassam].

British Museum.

Tiglathpileser I's prism inscription (two terra-cotta prisms,
duplicates of Layard's from 1850-51).

H. Rassam, *Asshur . . .* (1897), pp. 9, 12.

7.1.-17.5.1878; 16.11.1878-January 1879; 27.9.-11.11.
1880.

H. Rassam. [Nimrud Rassam].

British Museum.

H. Rassam, *Asshur . . .* (1897), pp. 256 f.

14.8.1903-Spring 1914.

R. Koldewey. [Julius Jordan]; W. Andrae (29.11.1903-
1914). [Julius Jordan, E. Herzfeld, C. Preusser, W.
Bachmann, H. Prinz, etc.].

Deutsche Orient-Gesellschaft, Berlin.

Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin
Nr. 20–54 (1903–14).—W. Andrae in *Wissenschaftliche*
Veröffentlichungen der Deutschen Orient-Gesellschaft 10
(*Der Anu-Adad Tempel*, 1909); 23 (*Die Festungswerke*
von Assur, 1913); 24 (*Die Stelenreihen in Assur*, 1913);
39 (*Die archaischen Ishtar-Tempel in Assur*, 1922);
58 (*Die jüngeren Ishtar-Tempel in Assur*, 1935).—
W. Andrae, *Das wiedererstandene Assur* (1938).—C.
Preusser, *Die Wohnhäuser in Assur* (1954; WVD OG 64).
—A. Haller, *Die Gräber und Grüfte von Assur* (1954;
WVD OG 65).—C. Preusser, *Die Paläste in Assur* (1954;
WVD OG 66).—A. Haller, *Die Heiligtümer des Gottes Assur*
und der Sin-Šamaš-Tempel in Assur (1954; WVD OG 67).

7. 1849–1851. KUYÛNJIK, see No. 5.

8. 1849–1850. NIMRÛD, see No. 3.

9. 1850. WARKA (Erech, Uruk).

After 17.1.1850¹ (3 weeks).

W. K. Loftus.

The Turco-Persian Frontier Commission (under the leader-
ship of Colonel W. F. Williams).

Parthian tombs and coffins.

January–March 1854.

W. K. Loftus. [T. Kerr Lynch; draftsman: W. Bouteher].
Assyrian Exploration Fund, London.

Wuswas; Buweriye; coloured mosaic pins, temple.

W. K. Loftus, *Travels and Researches in Chaldaea and Susi-
ana, with an Account of Excavations at Warka . . .*
(1857).—W. K. Loftus, *Warka, its Ruins and Remains*
(*Transactions of the Royal Society of Literature* VI
(1859), pp. 1–64).

14.11.1912–12.5.1913.

Julius Jordan. [C. Preusser].

Deutsche Orient-Gesellschaft, Berlin.

¹ See W. K. Loftus, *JRGS* XXVI (1856), pp. 131–53.

Wuswas; Anu-Antum Temple (Seleucid period); Eanna; Parthian remains (palace).

J. Jordan, *Uruk-Warka* . . . (1928; *WVDOG* 51).

November 1928–26.3.1939 (11 campaigns).

J. Jordan (1928–31); A. Nöldeke (1931–33); E. Heinrich (1933–34); A. Nöldeke (1934–39). [H. Lenzen, A. von Haller, C. Preusser; epigraphists: A. Schott, W. von Soden, W. Eilers, O. Krückmann, A. Falkenstein].

Notgemeinschaft der Deutschen Wissenschaft; Deutsche Forschungsgemeinschaft (1934 ff.).

Eanna and the ziggurat; the Anu ziggurat; the "White Temple"; the "Red Temple", the "maze"; mosaic columns and walls, the southern building complex; archaic cuneiform tablets (the earliest known); 18 levels.

1.–11. *vorläufiger Bericht über die von der Notgemeinschaft der Deutschen Wissenschaft in Uruk unternommenen Ausgrabungen* . . . written by J. Jordan, A. Nöldeke, E. Heinrich, H. Lenzen, A. von Haller, etc. (*Abhl. d. preuss. Akad. d. Wiss., Phil.-hist. Kl.* 1929–40 (1930–41).—*Ausgrabungen der Deutschen Forschungsgemeinschaft in Uruk-Warka I–V* (1936–53) written by E. Heinrich, A. Falkenstein, H. Lenzen, Ch. Ziegler.—W. Andrae, *The Story of Uruk* (*Antiquity* X (1936), pp. 133–45).—C. H. Bohtz, *In den Ruinen von Warka. Vom Leben und Wirken einer deutschen Ausgrabungs-Expedition in Iraq* (1941; dealing with the 11. campaign).

29.1. 1954 ff.

H. Lenzen. [A. Falkenstein, C. H. Bohtz, B. Hrouda].

Deutsche Orient-Gesellschaft und Deutsche Archäologische Institut.

Neo-Assyrian and Neo-Babylonian building remains.

Sumier X 1 (1954), pp. 86–88, 100–01.

10. 1850. TELL MOHAMMED = TELL ABÛ ḤARMAL (Diniktim).
26.10.–5.12.1850.

A. H. Layard.

British Museum.

"Hollow bronze balls" with inscriptions (e. g. Hammurabi's name); bronze ankle-rings; images in baked clay ("Assyrian Venus"); foundations in brick masonry.

A. H. Layard, *Discoveries . . .* (1853), p. 477.

1945; 1947; March-June 1948; 1948-1949; 17.9.-30.11. 1949.

Taha Baqir. [Muhammed Ali Mustafa, Seton Lloyd].

The Iraq Government (Department of Antiquities, Baghdad).

Temple of Hani; private houses; c. 2400 cuneiform tablets (e. g. the geographical list, the Codex Eshnunna, mathematical and historical texts).

Taha Baqir, *Sumer* 11 1 (1946), 11 2 (1946); IV 2 (1948).

11. 1850. BABYLON

7.12.-19.12.1850.

A. H. Layard.

British Museum.

Excavation on a small scale at Bâbil, Qasr, 'Amrân.

A. H. Layard, *Discoveries . . .* (1853), pp. 502 ff.

15.7.1852-November 1852.

Fulgence Fresnel. [Jules Oppert, Félix Thomas].

The French Government (Expédition scientifique et artistique de Mésopotamie et de Médie).

Diggings at Bâbil, Qasr, 'Amrân.

J. Oppert, *Expédition scientifique en Mésopotamie exécutée par ordre du Gouvernement, de 1851 à 1854* (1863, 1859; 2 vols.).-M. Pillet, *L'Expédition scientifique et artistique de Mésopotamie et de Médie . . .* (1922).

9.3.-12.4.1867.

T. M. Chevalier de Lycklama à Nijeholt.

Trial-trenches (assistance of several workmen).

T. M. de Lycklama à Nijeholt, *Voyage en Caucase, et en Perse, dans la Mésopotamie, le Kurdistan . . . et la Turquie* III (1874), pp. 270 ff.

30.1.–2.4.1879; 24.5.–9.6.1880; 11.11.1880–December 1880; Spring 1882.

H. Rassam.

British Museum.

C. 3000 Neo-Bab. cuneiform tablets (e. g. the Egibi texts); the Cyrus Cylinder.

H. Rassam, *Asshur . . .* (1897), pp. 264 ff., 352 ff., 394 ff.

26.3.1899–10.3.1917.

R. Koldewey. [W. Andrae (1899–1903), F. Baumgarten (1902–03), A. Nöldeke (1902–08), J. Jordan (29.3.–3.8.1903), O. Reuther (1905 ff.), F. Wetzel (1907 ff.)].

Deutsche Orient-Gesellschaft, Berlin.

Mitteilungen der Deutschen Orient-Gesellschaft Nr. 2–53 (1899–1914).—R. Koldewey, *Die Pflastersteine von Aiburschabu in Babylon* (1901; *WVDOG* 2).—R. Koldewey, *Die Tempel von Babylon und Borsippa* (1911; *WVDOG* 15).—R. Koldewey, *Das wieder erstehende Babylon* (1913).—R. Koldewey, *Das Ischtar-Tor in Babylon* (1918; *WVDOG* 32).—Oscar Reuther, *Merkes, die Innenstadt von Babylon* (1926; *WVDOG* 47).—Fr. Wetzel, *Die Stadtmauern von Babylon* (1930; *WVDOG* 48).—R. Koldewey und Fr. Wetzel, *Die Königsburgen von Babylon* (1931–32, 2 vols.; *WVDOG* 54–55).—E. Unger, *Babylon . . .* (1931).—Fr. Wetzel und F. H. Weissbach, *Das Hauptheiligtum des Marduk in Babylon, Esagila und Etemenanki* (1938; *WVDOG* 59).

12. 1850. BIRS NIMRÛD (and IBRÂHÎM EL HÂLÎL) (Borsippa).

7.12.–19.12.1850.

A. H. Layard.

British Museum.

Plan of the restoration of the ziggurat.

A. H. Layard, *Discoveries . . .* (1853), pp. 495 ff.

15.7.1852–November 1852.

Fulgence Fresnel. [Jules Oppert, Félix Thomas].

The French Government (Expédition scientifique et artistique de Mésopotamie et de Médie).

J. Oppert, *Expédition scientifique en Mésopotamie I* (1863).

September–October 1854.

H. C. Rawlinson. [Joseph Toniatti].

British Museum.

The ziggurat; Nebuchadnezzar II's foundation cylinders.

H. C. Rawlinson, *On the Birs Nimrud, or the Great Temple of Borsippa* (JRS XVII (1860), pp. 1–34).

11.11.1880–December 1880.

H. Rassam.

British Museum.

Excavations in Ezida; remains of Nebuchadnezzar II's Palace; inscriptions.

H. Rassam, *Asshur . . .* (1897), pp. 268 ff., 344 ff.

November 1901; February–April 1902.

R. Koldewey. [W. Andrae].

Deutsche Orient-Gesellschaft, Berlin.

Ezida; the peribolos of the ziggurat; the City Wall.

R. Koldewey, *Die Tempel von Babylon und Borsippa* (1911; WVDOG 15).

13. 1850–1851. KAL'AT SHARĠĠĠĠĠĠ, see No. 6.

14. 1851. NUFFAR: NIFFER (Nippur).

January 1851–3.2.1851.

A. H. Layard.

British Museum.

Tombs.

A. H. Layard, *Discoveries . . .* (1853), pp. 556 ff.¹

6.2.–18.4.1889.

John P. Peters. [P. H. Field, J. H. Haynes, J. D. Prince; epigraphists: R. F. Harper, H. V. Hilprecht].

¹ Since Layard himself gives an account of his excavations at Nippur it must be due to a slip of memory that Sir Ernest Budge says in his *The Rise and Progress of Assyriology* (1925), p. 79: "there is no record that he [i. e. Layard] ever visited the great mounds in Lower Mesopotamia, e. g., those of Nuffar."

The Babylonian Exploration Fund, Philadelphia (E. W. Clark and other patrons).

Mound I (palace); Mound III (temple site with inscriptions);
Mound V (numerous cuneiform tablets from the Amorite
and Neo-Bab. periods).

14.1.-3.5.1890.

John P. Peters. [J. H. Haynes].

The Babylonian Exploration Fund, Philad.

Mounds III, V, and X; numerous cuneiform tablets.

20.3.1893-3.4.1894; 5.6.1894-15.2.1896.

J. H. Haynes. [Joseph A. Meyer † 1894].

The Babylonian Exploration Fund, Philad.

Mounds I and X; numerous cuneiform tablets (c. 8000,
e. g. the firm of Murashû from Persian times); the zig-
gurat.

6.2.1899-11.5.1900.

H. V. Hilprecht. [J. H. Haynes, H. V. Geere, Cl. S. Fisher].

University of Pennsylvania, Philadelphia.

Mound V: the temple library (c. 20,000 cuneiform tablets);
the ziggurat; deep excavations.

*The Babylonian Expedition of the University of Penn-
sylvania. Series A: Cuneiform Texts I-XXXI (1893-
1914); Series D: Researches and Treaties (1904-10).-
John Punnett Peters, Nippur or Explorations and Adven-
tures on the Euphrates (1897, 2 vols.).-H. V. Hilprecht,
Die Ausgrabungen der Universität von Pennsylvania im
Bel-Tempel zu Nippur (1903).-H. V. Hilprecht, The
Excavations in Assyria and Babylonia (1904), pp.
289-568.-Cl. S. Fisher, Excavations at Nippur . . . 1
(1905).*

20.11.1948-

Donald E. McCown. [R. C. Haines, F. R. Steele, J. Caldwell,
Carleton S. Coon; epigraphists: Th. Jacobsen, Vaughn
Crawford].

The Oriental Institute, Chicago, and the University of
Pennsylvania.

D. E. McCown, *Sumer* V 1 (1949), pp. 99–101; VI 1 (1950), pp. 99–100; X 1 (1954).—D. E. McCown, F. R. Steele, and S. N. Kramer, *The New Nippur Excavations* (Univ. of Penn., Univ. Museum Bulletin XVI 2, 1951).—*Ill. London News* 28.6.1952.

15. 1851. NABÎ YÛNUS (Nineveh).

In the period from 27.2.1851–April 1851.

A. H. Layard.

British Museum.

Inscriptions of Adad-nirâri III, Sennacherib, Esarhaddon; the palace of Esarhaddon.

A. H. Layard, *Discoveries . . .* (1853), pp. 596 f.

End of 1852–some months in 1853.

Hilmi Pasha, Governor of Mosul.

The Turkish Government (?).

Winged bull and Sennacherib's Nabî Yûnus Inscription.

H. Rassam, *Asshur . . .* (1897), pp. 6–7.

2.4.1879–May 1879.

H. Rassam.

British Museum.

H. Rassam, *Asshur . . .* (1897), pp. 292 ff.

16. 1851. SHERÎF KHÂN (Tarbîşu; 5 km northwest of Kuyunjik).

Two weeks in the period 27.2.1851–April 1851.

A. H. Layard.

British Museum.

Two temples and Esarhaddon's palace built to his son Ashurbanipal.

A. H. Layard, *Discoveries . . .* (1853), pp. 598 f.

17. 1851–1852. KĀL'AT SHARKĀT, see No. 6.

18. 12.1.1852–1855. KHORSABAD, see No. 2.

19. 15.7.1852. BABYLON, see No. 11.

20. 15.7.1852. BIRS NIMRÛD, see No. 12.

21. 1852. AL UḤAIMIR (Kish).

October 1852 (one week).

Fulgence Fresnel. [J. Oppert].

The French Government (Expédition scientifique et artistique de Mésopotamie et de Médie).

Brick pavement of Nebuchadnezzar II; archaic inscription; small objects.

J. Oppert, *Expédition scientifique en Mésopotamie* . . . 1 (1863).

28.1.–30.4.1912.

Henri de Genouillac. [Raoul Dronin].

Ministère de l'Instruction publique, France.

Temple ruins at Uḥaimir, to the west of these an Amorite settlement; at Ingharra Neo-Bab. buildings, cuneiform tablets.

Fouilles françaises d'El-'Akhymer. Premières recherches archéologiques à Kish. Mission d'Henri de Genouillac (1924–25, 2 vols.).

February 1923–Spring 1933 (10 campaigns).

Stephen Langdon. [Field-director 1923–26: E. Mackay; assistants: W. H. Lane, D. T. Rice, epigraphist: E. Burrows.—Field-director 1926–33: L. Ch. Watelin; assistants: E. Schroeder, Henri Field, T. K. Penniman, R. Watelin].

Herbert Weld [-Blundell] (for the University of Oxford) and the Field Museum of Natural History, Chicago.

The A- and Y-cemeteries; the ziggurats F and E; the A-palace; temples (i. a. Neo-Bab.); a 17 m deep excavation north of the ziggurat at Ḥursagkalama (Watelin).

Excavations at Kish 1 (1924) by S. Langdon, III–IV (1930, 1934) by L. Ch. Watelin.—E. Mackay, *Report on the Excavation of the "A" Cemetery at Kish, Mesopotamia* (1925) and *A Sumerian Palace and the "A" Cemetery at Kish, Mesopotamia* (1929) publ. in *Field Museum of Natural History, Anthropology, Memoirs* 1 1–2.—H. Field, *The Field Museum-Oxford University Expedition*

to Kish, Mesopotamia, 1923-29 (1929; *Field Museum of Natural History. Anthropology. Leaflet 28*).

22. 1852-1854. KUYÛNLIK, see No. 5.

23. 1852-53. NABÎ YÛNUS, see No. 15.

24. 1852-54. NIMRÛD, see No. 3.

25. 1853. KAL'AT SHARKÂT, see No. 6.

26. 1854. WARKA, see No. 9.

27. 1854. MUḲAYYAR (Ur).

1854 (finished before 31.3.).

J. E. Taylor.

British Museum.

The ziggurat (trial-trenches); Nabonid's foundation cylinders; vaulted tombs; brick house.

J. E. Taylor, *Notes on the Ruins of Muqeyar* (*JRAS XV* (1855), pp. 260-76).

April 1918.

R. Campbell Thompson.

British Museum.

Trial-trenches.

February 1919.

H. R. Hall.

British Museum.

Building B (Eharsag); the temenos wall of the temple area E₂-temen-ni₂-gur₂; pottery.

H. R. Hall, *A Season's Work at Ur . . .* (1930), pp. 158-86.

November 1922-25.2.1934 (12 campaigns).

C. L. Woolley. [F. G. Newton (1922-24), M. E. L. Malloy (1925-31), J. Cruikshank Rose (1930-32) a. o.; epigraphists: Sidney Smith (1922-23), C. J. Gadd (1923-24), L. Legrain (1924-26), E. Burrows (1926-30)].

British Museum and the Museum of the University of Pennsylvania, Philadelphia.

The ziggurat; temples (E₂-kiš-šir₅-gal₂; Edublalmah); Royal Cemetery; Flood Pit (60 feet deep); inscriptions; archaic texts; Ubaid pottery and statuettes; seals.

C. L. Woolley, *The Antiquaries Journal* III (1923), V–XIV (1925–34), cf. *The Museum Journal*, Univ. of Pennsylvania, XIV–XXIV.—*Ur Excavations* Vol. II¹: C. L. Woolley, *The Royal Cemetery* (1934; 2 vols); III: L. Legrain, *Archaic Seal-impressions* (1936); V: C. L. Woolley, *The Ziggurat and its Surroundings* (1939); X: L. Legrain, *Seal Cylinders* (1951).—*Ur Excavations. Texts I–V* (1928–53) by C. J. Gadd, L. Legrain, E. Burrows, H. H. Figulla, W. J. Martin.—Sir Leonard Woolley, *Excavations at Ur . . .* (1954).

28. 1854. SINKARA, SENKEREH (Larsa).

April 1854.

W. L. Loftus. [T. Kerr Lynch; draftsman: W. Boucher]. Assyrian Exploration Fund, London.

Remains of temple and ziggurat; cuneiform tablets (Ur III, Kassite period, Nebuchadnezzar II).

W. K. Loftus, *Travels and Researches in Chaldaea . . .* (1857).

10.2.–2.4.1933.

André Parrot. [G. Tellier].

Musées nationaux (Louvre, Paris).

A. Parrot, *Les fouilles de Tello et de Senkerek-Larsa, campagne 1932–33* (RA XXX (1933), pp. 169–82) and *Villes enfouies. Trois campagnes de fouilles en Mésopotamie* (1934); Ch.-F. Jean, *Larsa . . .* (1931).

29. 1854. TELL ŠIFR (Kutalla).

April 1854.

W. K. Loftus. [T. Kerr Lynch; draftsman: W. Boucher]. Assyrian Exploration Fund, London.

Cuneiform tablets from the Larsa and Amurru dynasties.

W. K. Loftus, *Travels and Researches in Chaldaea . . .* (1857).

¹ As for Vol. I, see below No. 101.

30. 21.4.1854-1855. KUYÛNJIĶ, see No. 5.

31. 21.4.1854-1855. NIMRÛD, see No. 3.

32. Sept. 1854. BIRS NIMRÛD, see No. 12.

33. 1855. TELL AL LAHAM.

January 1855.

J. E. Taylor.

British Museum.

Trial-trenches, tombs.

J. E. Taylor, *Notes on Abu Shahrein and Tel el Lahm*
(*JRAS* XV (1855), pp. 404-15).

April 1918.

R. Campbell Thompson.

British Museum.

Bricks from the time of Bur-Sin and Nabonid.

R. C. Thompson, *Archaeologia* LXX (1920), pp. 141-42.

February 1949.

Fuad Safar.

The Iraq Government (Department of Antiquities, Baghdad).

11 soundings; Neo-Bab. graves; two buildings.

Fuad Safar, *Soundings at Tell Al-Laham* (*Sumer* V 2, 1949).

34. 1855. ABÛ SHAHRAIN (Eridu).

January 1855.

J. E. Taylor.

British Museum.

Plan of the site.

J. E. Taylor, *Notes on Abu Shahrein and Tell el Lahm*
(*JRAS* XV (1855), pp. 404-15).

April 1918.

R. Campbell Thompson.

British Museum.

Trial-pits; plan of the site; examination of the painted pottery.

R. C. Thompson, *The British Museum Excavations at Abu Shahrain in Mesopotamia in 1918* (*Archaeologia* LXX (1920), pp. 101–44).

23.3.–8.5.1919.

H. R. Hall.

British Museum.

Bricks of Bur-Sin; the temenos wall of the ziggurat; uncovered buildings.

H. R. Hall, *Proceedings of the Society of Antiquaries* XXXII (1919), pp. 22 ff. and *A Season's Work at Ur, Al-'Ubaid, Abu Shahrain (Eridu), and elsewhere . . .* (1930), pp. 187–228.

24.12.1946–March 1949 (the winter months).

Naji al-Aşil. [Fuad Safar, Muhammed Ali Mustafa].

The Iraq Government (Department of Antiquities, Baghdad).

Eridu pottery; Eridu crania; the ziggurat; 17 "temple soundings" (with Ubaid temples); "hut soundings" (19 levels).

Seton Lloyd and Fuad Safar, *Sumer* III 2 (1947), IV 2 (1948), VI 1 (1950).

35. 1867. BABYLON, see No. 11.

36. 9.4.1873. NIMRÛD, see No. 3.

37. 7.5.1873. KUYÛNJIĶ, see No. 5.

38. 1874. KUYÛNJIĶ, see No. 5.

39. 1877. TELLOH: TELL-LÔH (Lagash).

5.3.–11.6.1877; 18.2.–9.6.1878.

Gaston Charles Ernest Chocquin de Sarzec. [Architect: H. de Sevelinges].

The Palace (Tell A); Fragments of the Stele of Vultures (Tell A); "House of Fruits" (Tell K); inscriptions (Tell I).

24.2.-13.3.1879.

H. Rassam.

British Museum.

Trial-trenches, inscriptions (Gudea), cuneiform tablets.

H. Rassam, *Asshur . . .* (1897), pp. 276 ff.

21.1.1880-15.3.1881; 1888-1890; 1893-1895; 27.3.1898-May 1898; 14.12.1899-May 1900 (11 campaigns 1877-78 included).

G. Ch. Ernest Chocquin de Sarzec.

The French Government (Louvre, Paris).

Tell A; statues of Gudea; Stele of Vultures; bronze figurines; cuneiform tablets (in 1893-94 c. 30,000 tablets robbed by the natives); the Gudea inscriptions; Tell K; Tell V (cuneiform tablets).

Léon Heuzey, *Découvertes en Chaldée par Ernest de Sarzec. Avec le concours de Arthur Amiaud et François Thureau-Dangin* (1884-1912; 2 vols.).-L. Heuzey, *Une villa royale chaldéenne* (1900) and *Musée national du Louvre. Catalogue des antiquités chaldéennes* (1902).

January-May 1903; 1904; 1905; 1909.

Gaston Cros.

The French Government (Louvre, Paris).

Tell U; Tell H (necropole); Tell K and Gudea's "enceinte".

Gaston Cros, *Nouvelles fouilles de Tello. Avec le concours de Léon Heuzey et François Thureau-Dangin* (1910).

18.1.-15.4.1929; 27.11.1929-27.2.1930; 11.11.1930-22.2.1931.

Henri de Genouillac. [R. Ghirshman, G. Tellier, A. Parrot].

The French Government (Louvre, Paris).

Deep digging down to the infiltration of water over an area of 800 sq.m (Urnk and Jeimet Nasr Pottery); the "East Mound" (Ubaid Pottery).

H. de Genouillac, *Fouilles de Telloh 1: Époques présargoniques* (1934), II: *Époque d'Ur III^e dynastie et de Larsa* (1936).

1931-32; 1932-33 (in all at Telloh 20 French campaigns).

André Parrot. [G. Tellier, J. de Jaegher].

The French Government (Louvre, Paris).

The "East Mound"; Ur-Ningirsu's Hypogeum.

A. Parrot, *Fouilles de Tello, campagne 1931-32*, (RA XXIX (1932), pp. 45-57), *Les fouilles de Tello et de Senkereh-Larsa, campagne 1932-33* (RA XXX (1933), pp. 169-82), *Villes enfouies. Trois campagnes de fouilles en Mésopotamie* (1934), and *Tello. Vingt campagnes de fouilles (1877-1933)* (1948).

40. 1878. KUYÛNJIĶ, see No. 5.

41. 1878. NIMRÛD, see No. 3.

42. 1878. KAL'AT SHARKÂT, see No. 6.

43. 1878. BALÂWÂT (Ingur-Enlil).

January 1878.

H. Rassam. [Nimrud Rassam].

British Museum.

The Bronze Gates of Shalmaneser III.

H. Rassam, *TSBA* VII (1882), pp. 45-57 and *Asshur* . . . (1897), pp. 201 ff.

44. 18.2.1878. TELLOH, see No. 39.

45. 1878-1879. KUYÛNJIĶ, see No. 5.

46. 1878-1879. NIMRÛD, see No. 3.

47. 1878-1879. KAL'AT SHARKÂT, see No. 6.

48. 30.1.1879. BABYLON, see No. 11.

49. 24.2.1879. TELLOH, see No. 39.

50. 2.4.1879. NABÎ YÛNUS, see No. 15.

51. 1880-1881. TELLOH, see No. 39.

52. 24.5.1880. BABYLON, see No. 11.
53. 1880. TELL DAILLAM: DELEM (Dilbat).
In the period 24.5.-9.6.1880.
H. Rassam.
British Museum.
Neo-Bab. letters and contracts.
H. Rassam, *Asshur . . .* (1897), p. 347.
54. 27.9.1880. KUYÛNJIĶ, see No. 5.
55. 27.9.1880. NIMRÛD, see No. 3.
56. 27.9.1880. KAL'AT SHARKÂT, see No. 6.
57. 11.11.1880. BABYLON, see No. 11.
58. 1880. DAIR: DÊR.
In the period 11.11.-31.12.1880.
H. Rassam.
British Museum.
H. Rassam, *Asshur . . .* (1897), pp. 398 f.

Winter 1890-91.
E. A. Wallis Budge.
British Museum.
C. 3000 cuneiform tablets (Amurru Dynasty).
E. A. Wallis Budge, *By Nile and Tigris* (1920; 2 vols.)
and *The Rise and Progress of Assyriology* (1925), pp. 141-
42, 168-69.

1.1.1927.
Walter Andrae and Julius Jordan.
Notgemeinschaft der Deutschen Wissenschaft.
Plan of Dêr.
W. Andrae und J. Jordan, *Tall ad Deir (Iraq I)* (1934),
pp. 56-59).

1941.
Taha Baqir. [Muhammed Ali Mustafa].
The Iraq Government (Department of Antiquities, Baghdad).

C. 300 cuneiform tablets.

Taha Baqir, *Sumer* 1 2 (1945), pp. 37-54.

59. 1880. BIRS NIMRÛD, see No. 12.

60. 1881. ABÛ ḤABBAH (Sippar).

January 1881-July 1882.

H. Rassam.

British Museum.

The ziggurat; 170 rooms; c. 40-60,000 cuneiform tablets.

H. Rassam, *TSBA* VIII (1885), pp. 177 ff. and *Asshur* . . . (1897), pp. 397 ff.

January 1894-20.4.1894.

Vincent Scheil. [Bedri Bey].

Imperial Ottoman Museum, Constantinople (Ḥamdî Bey).

Cuneiform tablets (c. 1000 from the Amurru Dynasty); private houses; walls; temple site.

V. Scheil, *Une saison de fouilles à Sippar [Janvier-Avril 1894]* (*Mémoires publ. p. l. membr. d. l'Inst. franç. d'arch. orient. au Caire* 1, 1902).

1.1.1927.

W. Andrae and J. Jordan.

Notgemeinschaft der Deutschen Wissenschaft.

Plan of Sippar.

W. Andrae und J. Jordan, *Abu Habbah-Sippar (Iraq* 1 (1934), pp. 50-55).

61. 1881-1882. TELL IBRĀHĪM (Kutha).

In the period January 1881-July 1882.

H. Rassam.

British Museum.

Cuneiform tablets and cylinder seals, both from the Neo-Bab. period; necropolis.

H. Rassam, *Asshur* . . . (1897), pp. 409-11.

62. 1882. BABYLON, see No. 11.

63. 1887. SURGHÛL.
4.1.-26.2.1887.
Robert Koldewey. [B. Moritz, Ludwig Meyer].
L. Simon (Die Königlich Preussischen Museen).
Necropoles (cremation).
64. 1887. AL HIBBAH.
29.3.-11.5.1887.
Robert Koldewey. [B. Moritz, Ludwig Meyer].
James Simon, Berlin.
Necropoles (cremation); ziggurat (?)
R. Koldewey, *Die altbabylonischen Gräber in Surghul und El Hibba* (ZA II (1887), pp. 403-30).
65. 1888-1889. KUYÛNJIḲ, see No. 5.
66. 1888-1890. TELLOH, see No. 39.
67. 1889. NIPPUR, see No. 14.
68. 1890. NIPPUR, see No. 14.
69. 1890-1891. KUYÛNJIḲ, see No. 5.
70. 1890-1891. DAIR, see No. 58.
71. 1893-1895. TELLOH, see No. 39.
72. 1893-1896. NIPPUR, see No. 14.
73. 1894. ABÛ ḤABBAH, see No. 60.
74. 1898. TELLOH, see No. 39.
75. 1899-1900. NIPPUR, see No. 14.
76. 26.3.1899-1917. BABYLON, see No. 11.
77. 14.12.1899-1900. TELLOH, see No. 39.
78. 1900. FARA (Shuruppak).
April 1900.
H. V. Hilprecht.
University of Pennsylvania, Philadelphia.

Pre-Sargonic bricks, burial urns, wells, drains.

H. V. Hilprecht, *The Excavations in Assyria and Babylonia* (1904), pp. 538 f.

June 1902–March 1903.

R. Koldewey. [W. Andrae, A. Nöldeke, F. Baumgarten].
Deutsche Orient-Gesellschaft, Berlin.

Jemdet Nasr Pottery; archaic cuneiform tablets; tombs,
cylinder seals, remains of buildings.

Ernst Heinrich, Walter Andrae, *Fara. Ergebnisse der Ausgrabungen der Deutschen Orient-Gesellschaft in Fara und Abu Hatab 1902–1903* (1931).

23.2.–30.4.1931.

Erich Schmidt. [D. W. Lockard, E. L. White, K. Leitner;
epigraphist: S. N. Kramer].

University of Pennsylvania, Philad.

Fara I–III (from Jemdet Nasr–Ur III); archaic texts.

E. Schmidt, *Excavations at Fara* (MJ XXII (1931), pp. 193–245).

79. 1900. ABÛ ḤATĀB (Kisurra).

April 1900.

H. V. Hilprecht.

University of Pennsylvania, Philad.

Trial excavations "in one of the rooms".

H. V. Hilprecht, *The Excavations in Assyria and Babylonia* (1904), pp. 538 f.

24.12.1902–25.2.1903.

R. Koldewey. [W. Andrae].

Deutsche Orient-Gesellschaft, Berlin.

Pottery, figurines, plaques inscribed with Bur-Sin's
name.

Ernst Heinrich, Walter Andrae, *Fara. Ergebnisse der Ausgrabungen der Deutschen Orient-Gesellschaft in Fara und Abu-Hatab 1902–03* (1931).

80. 1901–1902. BIRS NIMRÛD, see No. 12.

81. 1902. JÔKHA (Umma).
 December 1902.
 Walter Andrae.
 Deutsche Orient-Gesellschaft, Berlin.
 Fragment of diorite-statue, inscription, plan; cuneiform tablets (since the turn of the century clandestinely dug up by the natives).
Aus einem Berichte W. Andrae's über seine Excursion von Fara nach den südbabylonischen Ruinenstätten (MDOG Nr. 16 (1902-03), pp. 20-21).
82. 1902-1903. FARA, see No. 78.
83. 1902-1903. ABÛ HĀTAB, see No. 79.
84. Jan. 1903. TELLOH, see No. 39.
85. 3.3.1903-1905. KUYÛNJIĶ, see No. 5.
86. 1903. BISMĀYA: BISMIYAH (Adab).
 Spring 1903.
 W. Andrae.
 Deutsche Orient-Gesellschaft, Berlin.
 Plan of the site.
 W. Andrae, *MDOG* Nr. 16 (1902-03), pp. 26-27.
 25.12.1903-31.5.1904; 19.9.1904-November 1904.
 Edgar James Banks; V. S. Persons (from the end of September-November 1904).
 The Oriental Exploration Fund, University of Chicago.
 12 tells (palace, Ishtar temple, Ninĥursag's temple and ziggurat, private houses, necropolis); inscribed bricks (Naram-Sin, Bur-Sin); Mesilim's Vase; Lugal-dalu's statue; numerous cuneiform tablets (pre-Sargonic, Ur III).
 R. F. Harper, *Report from Bismya I-II (AJSL XX (1903-04), pp. 207-08, 260-68).*-E. J. Banks, *Bismya, or the lost City of Adab . . . (1912).*
87. 14.8.1903-1914. KĀL'AT SHARKĀT, see No. 6.

88. 1904. TELLOH, see No. 39.
89. 19.9.1904. BISMĀYA, see No. 86.
90. 1905. TELLOH, see No. 39.
91. 1909. TELLOH, see No. 39.
92. 1911. SĀMARRĀ.
 15.5.–28.5.1911.
 Ernst Herzfeld. [Samuel Guyer, Th. Bartus, Bedri Bey].
 The German Government, Deutsche Bank, Kaiser-Wil-
 helm-Gesellschaft zur Förderung der Wissenschaften,
 Elise Wentzel-Heckmann Stiftung.
 Prehistoric site with tombs and painted pottery.
 E. Herzfeld, *Die Ausgrabungen von Samarra V: Die vor-
 geschichtlichen Töpfereien von Samarra* (1930; *Forsch. z.
 islam. Kunst* II 5).
93. 1912. AL UḤAIMIR, see No. 21.
94. 1912–1913. WARKA, see No. 9.
95. 1913–1914. TULŪL AL ‘AḲIR (Kâr-Tukulti-Ninurta).
 15.10.1913–2.3.1914.
 Walter Bachmann.
 Deutsche Orient-Gesellschaft, Berlin.
 Fortifications; ziggurat; Ashurtemple; palace painted in
 colours.
 W. Andrae und W. Bachmann, *MDOG* Nr. 53 (1914),
 pp. 41–51.—W. Andrae, *Farbige Keramik aus Assur*
 (1923).
96. 1918. MUḲAYYAR, see No. 27.
97. 1918. ABŪ SHAHRAIN, see No. 34.
98. 1918. TELL AL LAHAM, see No. 33.
99. Febr. 1919. MUḲAYYAR, see No. 27.
100. 23.3.1919. ABŪ SHAHRAIN, see No. 34.

101. 1919. TELL AL 'UBAID.

8.4.-17.5.1919.

H. R. Hall.

British Museum.

Temple terrace, copper figures (Im-dugud relief), mosaics, inscribed bricks with Shulgi's name.

H. R. Hall, *A Season's Work at Ur, Al-'Ubaid, Abu Shahrain (Eridu), and elsewhere. Being an unofficial Account of The British Museum Archaeological Mission to Babylonia, 1919* (1930).

Winter 1923-1924.

C. L. Woolley.

British Museum and the Museum of the University of Pennsylvania.

Ubaid Pottery, flint, obsidian; temple with columns inlaid with mosaic; copper sculptures of animals; A-an-ni-padda's foundation inscription.

C. L. Woolley, *Excavations at Tell el Obeid (The Antiquaries Journal IV (1924), pp. 329-46).* - *Ur Excavations Vol. I: H. R. Hall and C. L. Woolley, Al-'Ubaid (1927).*

January 1937 (4 days).

Pinhaz Delougaz and Seton Lloyd.

The Oriental Institute, University of Chicago.

Temple oval parallel with Khafâjah's.

P. Delougaz, *A short Investigation of the Temple at Al-'Ubaid (Iraq V (1938), pp. 1-11).*

102. 1922-1934. MUKAYYAR, see No. 27.

103. 1923-1933. AL UHAIMIR, see No. 21.

104. 1923-1924. TELL AL 'UBAID, see No. 101.

105. 1924. TELL DURAIHIM: DREHEM (Puzurish-Dagan).

March 1924.

Stephen Langdon.

Herbert Weld [-Blundell] (for the University of Oxford) and the Field Museum of Natural History, Chicago.

Cuneiform tablets (since 1908 by thousands dug up clandestinely and sold by the natives).

106. 1925. YORGAN TEPE (Nuzu: Nuzi; Gazur).

Winter 1925-1926.

Edward Chiera.

The Iraqi Museum, Baghdad (Gertrude Bell) and the American School of Oriental Research, Baghdad.

Private house; c. 550 cuneiform tablets.

BASOR 20 ff. (1925 ff.).

Winter 1927-1928.

Edward Chiera. [Ephraim A. Speiser, Leroy Waterman; architect: E. Wilensky].

The University of Harvard, Cambridge, U. S. A. and the American School of Oriental Research, Baghdad.

Palace, private houses, legal cuneiform texts.

Winter 1928-1929.

Robert H. Pfeiffer. [P. Delougaz, E. Wilensky].

The University of Harvard, Cambridge, U. S. A. (Semitic Museum, Fogg Museum, Peabody Museum), the American School of Oriental Research, Baghdad, and the Museum of the University of Pennsylvania, Philad.

Palace; deep digging.

Winter 1929-1930; Winter 1930-1931.

Richard F. S. Starr. [H. Fr. Lutz, R. W. Ehrich, Ch. Bache, Th. J. Meek; architect: E. Wilensky].

The University of Harvard, Cambridge, U. S. A. (Semitic Museum, Fogg Museum, Peabody Museum), the American School of Oriental Research, Baghdad, and the Museum of the University of Pennsylvania, Philad.

Temple site; city wall; Parthian settlement; deep digging; cuneiform tablets.

Richard F. S. Starr, *Nuzi. Report on the Excavations at Yorgan Tepe near Kerkuk, Iraq, conducted . . . 1927-31 (1937-39; 2 vols.)*.

107. 1925. JEMDET NASR (Kidnun).
 December 1925–March 1926.
 S. Langdon. [Ernest Mackay].
 Herbert Weld [-Blundell] (for the University of Oxford)
 and the Field Museum of Natural History, Chicago.
 Painted pottery; the "Palace"; archaic cuneiform tablets.
 S. Langdon, *Ausgrabungen in Babylonien seit 1918* (1927;
Der Alte Orient 26. Bd.), pp. 67 ff.—E. Mackay, *Report*
on the Excavations at Jemdet Nasr, Iraq (1931; *Field*
Museum of Natural History, Anthropology, Memoirs 1 3).
 —H. Field and Richard A. Martin, *Painted Pottery from*
Jemdet Nasr (*AJA* 39 (1935), pp. 310–20).
- March 1928.
 Louis Charles Watelin. [Eric Schroeder].
 Herbert Weld [-Blundell] (for the University of Oxford)
 and the Field Museum of Natural History, Chicago.
 Architecture of the temple (Langdon: palace); crania.
 H. Field, *The Field Museum–Oxford University Expedition*
to Kish, Mesopotamia 1923–29 (1929; *Field Museum of*
Natural History, Anthropology, Leaflet 28), pp. 22–23,
 and *Human Remains from Jemdet Nasr, Mesopotamia*
(JRAS 1932, pp. 967–70).
108. 1.1.1927. ABÛ HABBĀH, see No. 60.
109. 1.1.1927. DAIR, see No. 58.
110. 1927. TEPE GAWRA.
 9.10.–27.10.1927.
 Ephraim A. Speiser. [E. Wilensky].
 Sondages.
 January–March 1931; Winter 1931–1932; 2.11.1932–
 Spring 1936 (not winter 1933–1934); 12.10.1936–19.3.
 1937; 1.11–15.12.1937; 15.3–7.5.1938.
 E. A. Speiser (1931–32); Charles Bache (2.11.1932–36);
 E. A. Speiser (12.10.1936–1937); E. A. Speiser (1.11.
 1937–1938; field-director: Charles Bache). [A. J. Tobler
 a. o.; epigraphists: Cyrus Gordon, A. C. Piepkorn].

The American School of Oriental Research, Baghdad, the
Museum of the University of Pennsylvania, Philad.,
and Dropsie College, Philadelphia.

26 building levels, pottery, tholoi.

E. A. Speiser, *Excavations at Tepe Gawra I* (1935).—

A. J. Tobler, *Excavations at Tepe Gawra II* (1950).

111. 1927–1932. KUYŪNJIḲ, see No. 5.

112. 1927. TELL 'UMAIR (Akshak?)

December 1927–Spring 1928; Winter 1928–29; 1929–30;
1931–32.

Leroy Waterman.

University of Michigan, the Toledo Museum of Art, Ohio,
and the Cleveland Museum.

Ziggurat, inscriptions (the Akshak Dynasty, further from
the Seleucid and Parthian period).

Leroy Waterman, 1.–2. *Preliminary Report upon the Ex-
cavations at Tell Umar, Iraq* (1931, 1933).

113. 1927–31. YORGAN TEPE, see No. 106.

114. 1928. JEMDET NASR, see No. 107.

115. 1928. ZARZI and HAZER MERD (West Cave).

1928.

Dorothy A. E. Garrod.

The American School of Prehistoric Research and the
Sladen Memorial Fund, London.

Cave-dwellers from palaeolithic age.

Dorothy A. E. Garrod and D. M. A. Bate, *The Palaeolithic
of Southern Kurdistan (Bulletin of the American School of
Prehistor. Research, in affiliation with the Archaeological
Institute of America, New Haven No. 6* (1930), pp. 13–23).

November 1949 (Hazer Merd, East Cave).

Faraj Basmachi and Carleton S. Coon.

The Iraq Government (Department of Antiquities, Baghdad).

F. Basmachi, *The Pottery of the Eastern Cave at Hazer
Merd (Sumer VI 1* (1950), pp. 91–92).

116. 1928–1939. WARKA, see No. 9.
117. 18.1.1929. TELLOH, see No. 39.
118. 1929–1935. KHORSABAD, see No. 2.
119. 27.11.1929–1930. TELLOH, see No. 39.
120. 1930. MEDAIN.
 March 1930.
 Roman Ghirshman. [G. Tellier].
 The French Government (Louvre, Paris).
 Deep digging at Tell A; necropolis from Isin-Larsa's time.
 R. Ghirshman, *Appendice sur les fouilles de Medaïn* (H. de Genouillac, *Fouilles de Telloh II* (1936), pp. 139–50).
121. Oct. 1930–1935. TELL BILLAH, see No. 4.
122. 11.11.1930–1933. TELLOH, see No. 39.
123. 1930–1936. TELL ASMAR (Eshnunna).
 17.11.1930–1936.
 Henri Frankfort. [P. Delougaz, Seton Lloyd, Gordon Loud; epigraphist: Th. Jacobsen].
 The Oriental Institute, Chicago: The Iraq Expedition.
 Palace (the Isin Period); Ginnil-Sin Temple; Abu Temple: archaic shrine, square temple, single shrine; Sumerian statuettes, cuneiform tablets.
 H. Frankfort, Thorkild Jacobsen, and Conrad Preusser, *OIC* 13 (1932).—H. Frankfort, *OIC* 16, 17, 19, and 20 (1933–36).—H. Frankfort, *Sculpture of the Third Millennium B.C. from Tell Asmar and Khafājah* (1939; *OIP* XLIV).—H. Frankfort, S. Lloyd, Th. Jacobsen, *The Ginnil-Sin Temple and the Palace of the Rulers at Tell Asmar* (1940; *OIP* XLIII).—P. Delougaz and Seton Lloyd, *Pre-Sargonic Temples in the Diyala Region* (1942; *OIP* LVIII).
124. 1930–1938. KHAFĀJAH (Tupliash?).
 22.11.1930–14.3.1938.
 Henri Frankfort (1930–Spring 1937; field-directors: 1930–31 Conrad Preusser; 1.1.1932–Spring 1937 P. Delou-

gaz); E. A. Speiser (Spring 1937–14.3.1938; field-director: P. Delongaz). [Seton Lloyd, Hamilton D. Darby, C. W. Mc Ewan a. o.; epigraphist: Th. Jacobsen].

The Oriental Institute, Chicago: The Iraq Expedition and, from the spring of 1937, The American School of Oriental Research, Baghdad and the Museum of the University of Pennsylvania, Philad.

Temple oval; Sumerian statuettes; Sin Temple; private houses.

H. Frankfort, Thorkild Jacobsen, and Conrad Preusser, *OIC* 13 (1932).—H. Frankfort, *OIC* 16, 17, 19, and 20 (1933–36).—P. Delongaz, *The Temple Oval at Khafājah* (1940; *OIP* LIII).—P. Delongaz and Seton Lloyd, *Pre-Sargonic Temples in the Diyala Region* (1942; *OIP* LVIII).—H. Frankfort, *More Sculpture from the Diyala Region* (1943; *OIP* LX).

125. Jan. 1931–1938. TEPE GAWRA, see No. 110.

126. 23.2.1931. FARA, see No. 78.

127. 10.2.1933. SENKEREH, see No. 28.

128. 1933. TELL BARGHUTHIÂT (Girumū).

February 1933.

L. Ch. Watelin.

Herbert Weld [-Blundell] (for the University of Oxford) and the Field Museum of Natural History, Chicago. Neo-Bab. remains (walls).

S. Langdon and D. B. Harden, *Excavations at Kish and Barghuthiat 1933* (*Iraq* I (1934), pp. 113–36).

129. 1933. KAŞR SHEMÂMOK (Kakzu).

February–April 1933.

Giuseppe Furlani. [Doro Levi, Fausto Franco].

Missione Archeologica Italiana di Mesopotamia.

Assyrian building ruins; Parthian necropolis.

G. Furlani, *Gli scavi italiani in Assiria (Campagna del 1933)*. (*Giornale della Società Asiatica Italiana* N. S. II (1934), pp. 265–76).

130. 1933. TELL ARPACHIAH.
 February–April 1933.
 M. E. L. Mallowan. [J. Cruikshank Rose].
 British School of Archaeology in Iraq, Baghdad, and
 British Museum.
 Tell Halaf Pottery; tholoi.
 M. E. L. Mallowan and J. Cruikshank Rose, *Excavations at
 Tall Arpachiyah 1933* (*Iraq* II (1935), pp. 1–178).
131. 1933. TEPE SHIENSHI.
 Spring 1933.
 Pinhas Delougaz. [H. D. Hill, C. W. McEwan].
 The Oriental Institute, Chicago: The Iraq Expedition.
 Fortifications (?); houses; pottery from the middle of the
 3rd millennium.
 H. Frankfort, *OIC* 17 (1934), pp. 89–92.
132. 1933, 1934. JERWÂN.
 Spring 1933, Spring 1934.
 Thorkild Jacobsen and Seton Lloyd.
 The Oriental Institute, Chicago: The Iraq Expedition.
 Sennacherib's Aqueduct; inscriptions.
 H. Frankfort, *OIC* 17 (1934), pp. 89–92.—Thorkild Ja-
 cobsen and Seton Lloyd, *Sennacherib's Aqueduct at
 Jerwan* (1935; *OIP* XXIV).
133. 1934–1936. ISHCHALI (Dûr-Rimush?).
 Winter 1934–35; Winter 1935–36.
 Henri Frankfort. [Th. Jacobsen, H. D. Hill].
 The Oriental Institute, Chicago: The Iraq Expedition.
 Ishtar Temple, palace (both from the Amurru Period);
 cuneiform tablets (contracts, mathematical texts, frag-
 ment of Gilgamesh Epic).
 H. Frankfort, *OIC* 20 (1936), pp. 74–100.
134. 1935–1937. TELL AGRAB.
 Winter 1935–1936, Winter 1936–1937.
 Henri Frankfort. [Seton Lloyd].

The Oriental Institute, Chicago: The Iraq Expedition.
Shara Temple (the Lagash Period); "Scarlet Ware"
Pottery.

F. O. Allen, *AJSL* LII (1935-36), p. 211.—H. Frankfort,
Ill. London News 12.9.1936.—P. Delougaz and Seton
Lloyd, *Pre-Sargonid Temples in the Diyala Region* (1942;
OIP LVIII).—H. Frankfort, *More Sculpture from the
Diyala Region* (1943; *OIP* LX).—P. Delougaz, *Pottery
from the Diyala Region* (1952; *OIP* LXIII).

135. 1937. TELL AL 'UBAID, see No. 101.

136. 1939. GRAI RESH.

20.5.-8.6.1939.

Seton Lloyd.

The Iraq Government (Department of Antiquities, Baghdad).
Uruk Pottery.

Seton Lloyd, *Some Ancient Sites in the Sinjar District (Iraq
V, 1938)* and *Iraq Government Soundings at Sinjar
(Iraq VII (1940), pp. 13-19).*

137. 1939. TELL KOSHI.

20.5.-8.6.1939.

Seton Lloyd.

The Iraq Government (Department of Antiquities, Baghdad).
Two Akkadian building levels (Minyan Pottery \neq Tell
Brak, Habur) and Nineveh 5 Pottery.

Seton Lloyd, *Iraq Government Soundings at Sinjar (Iraq
VII (1940), pp. 13-19).*

138. 1940-1941. TELL 'UQAIR.

1940; 1941.

Seton Lloyd. [Fuad Safar].

The Iraq Government (Department of Antiquities, Baghdad).
"Painted Temple", temple-platform with mosaic orna-
ment; Uruk and Jemdet Nasr Pottery.

Seton Lloyd and Fuad Safar, *Tell Uqair . . . (JNES II
(1943), pp. 132-58).*

139. 1941. DAIR, see No. 58.
140. 1942–1945. 'AḲAR ḲŪF (Dūr-Kurigalzu).
 1942; February–March 1943; October 1943–February 1944; November 1944–15.1.1945.
 Taha Baqir. [Field-director: Seton Lloyd; Muhammed Ali Mustafa].
 The Iraq Government (Department of Antiquities, Baghdad).
 Ziggurat (E-gi-dim); 3 temples; Mound A; Palace site (Tell el-'Abyad) with painted figures (Unit H).
 Taha Baqir, *Excavations at 'Aqar Qūf*, 1.–2. interim Report: 1942–43, 1943–44 (*Iraq*, Supplement 1944–45); 3. interim Report 1944–45 (*Iraq* VIII, 1946).
141. 1943, 1944. TELL ḤASSUNA.
 1943; 1944.
 Seton Lloyd and Fuad Safar.
 The Iraq Government (Department of Antiquities, Baghdad).
 6 strata, all pre-Ubaid (Strata III–VI with Samarra Pottery).
 Seton Lloyd and Fuad Safar, *Tell Hassuna* (JNES IV (1945), pp. 255–89).
142. 1945–1949. TELL ABŪ ḤARMAL, see No. 10.
143. 1946–1949. ABŪ SHAHRAIN, see No. 34.
144. 1947. TELL AL DHIBA'I.
 21.9.–26.10.1947.
 Muhammed Ali Mustafa.
 The Iraq Government (Department of Antiquities, Baghdad).
 5 strata from Akkadian–Kassite times.
 Muhammed Ali Mustafa, *Soundings at Tell al-Dhiba'i* (*Sumer* V 2 (1949), pp. 173–86).
145. 1948. MATARRAH: KARA YITAGH.
 24.3.–30.4.1948.
 Robert J. Braidwood. [Linda Braidwood, Charlotte M. Otten, Faraj Basmachi].

The Oriental Institute, Chicago.

Variant of the Hassunan assemblage; Samarra Pottery.

F. Basmachi, 1. *Supplementary Report on the Excavations at Tell Mattarah and Qal'at Jarmo . . .* (*Sumer* IV 2 (1948), pp. 134-36).—Robert J. Braidwood, Linda Braidwood, James G. Smith, and Charles Leslie, *Mattarah. A Southern Variant of the Hassunan Assemblage, Excavated in 1948* (*JNES* XI (1952), pp. 1-75).

146. 1948. THE MAKHMUR REGION (KAULA KANDAL; TELL IBRÂHÎM BAYIS [Old Makhmur], and TELL AḲRAH). April 1948 (3 weeks).

M. E. L. Mallowan and Mahmud El Amin.

The Iraq Government (Department of Antiquities, Baghdad).

Hassuna and Tell Halaf Period; North Ubaid Pottery and rudimentary Uruk Pottery.

Mahmud El Amin and M. E. L. Mallowan, *Soundings in the Makhmur Plain* (*Sumer* V 2, 1949; VI 1, 1950).

147. 1948. ḲAL'AT JARMO.

May 1948; Autumn 1950-June 1951.

Robert J. Braidwood. [Linda Braidwood, R. M. Adams, H. E. Wright, Jr., Bruce Howe a. o.].

The Oriental Institute, Chicago, from 1950 joined with the American School of Oriental Research, Baghdad. A pre-Hassunan site; 8 floor levels.

F. Basmachi, 1. *Supplementary Report on the Excavations at Tell Mattarah and Qal'at Jarmo*.—2. *Soundings at Qal'at Jarmo* (*Sumer* IV 2 (1948), pp. 134-36).—Robert J. and Linda Braidwood, *Jarmo. A Village of Early Farmers in Iraq* (*Antiquity* XXIV (1950), pp. 185-95) and *Sumer* VII (1951), pp. 99-106.—Robert J. Braidwood, *Ill. Lond. News* 15.12.1951 and *The Near East and the Foundations for Civilization* (1952).—H. E. Wright, Jr., *The Geological Setting of Four Prehistoric Sites in Northeastern Iraq* (*BASOR* 128 (1952), pp. 11-24).—Robert J. and Linda Braidwood, *The Earliest Village Communities of South-*

western Asia (Journal of World History 1 (1953), pp. 278-310).

148. 20.11.1948 ff. NIPPUR, see No. 14.

149. Febr. 1949. TELL AL LAHAM, see No. 33.

150. March 1949 ff. NIMRÛD, see No. 3.

151. 1949. BARDA BALKA.

May 1949.

Naji al-Aşil.

The Iraq Government (Department of Antiquities, Baghdad).

Palaeolithic finds.

Naji al Aşil, *Barda Balka (Sumer V 2, 1949).*

Spring 1951 (4 days).

Robert J. Braidwood. [Bruce Howe, Herbert E. Wright, Jr.].

The Iraq Government (Department of Antiquities, Baghdad), the Oriental Institute, Chicago, and the American School of Oriental Research, Baghdad.

R. J. Braidwood, *Sumer VII (1951), pp. 99-104, and BASOR 124 (1951), pp. 12-18.*—Bruce Howe and H. E. Wright, Jr., *Preliminary Report of the Soundings at Barda Balka (Sumer VII (1951), pp. 107-17).*—H. E. Wright, Jr., *BASOR 128 (1952), pp. 11-24.*

152. Nov. 1949. HAZER MERD, see No. 115.

153. 1950. BARADOST.

Spring 1950.

Fuad Safar and Henry Field.

The Iraq Government (Department of Antiquities, Baghdad) and the Peabody Museum, Harvard University. Pottery from the Hassuna, Ubaid, and Uruk periods.

Fuad Safar, *Pottery from Caves of Baradost (Sumer VI 2, 1950).*

10.5.-4.10.1951.

George G. Cameron. [Ralph S. Solecki, Mahmud El Amin].

The Iraq Government (Department of Antiquities, Baghdad) and the University of Michigan (Department of Near Eastern Studies).

15 caves in the Rowanduz District, i. a. Baradost.

Ralph S. Solecki, *Notes on a Brief Archaeological Reconnaissance of Cave Sites in the Rowanduz District of Iraq* (*Sumer* VIII 1 (1952), pp. 37-48).

154. 1950-1951. KAL'AT JARMO, see No. 147.

155. 1951. KARİM SHAHİR.

14.3.-9.5.1951.

Robert J. Braidwood. [Bruce Howe, H. E. Wright, Jr.].

The Oriental Institute, Chicago, and the American School of Oriental Research, Baghdad.

Site earlier than Kal'at Jarimo, later than Zarzi.

R. J. Braidwood, *A Preliminary Note on Prehistoric Excavations in Iraqi Kurdistan* (*Sumer* VII (1951), pp. 99-104) and *From Cave to Village in Prehistoric Iraq* (*BASOR* 124 (1951), pp. 12-18).-H. E. Wright, Jr., *BASOR* 128 (1952), pp. 11-24.

156. 10.5.1951. BARADOST, see No. 153.

157. 1951. PALEGAWRA.

24.5.-30.5.1951.

Robert J. Braidwood. [Bruce Howe, H. E. Wright, Jr.].

The Oriental Institute, Chicago, and the American School of Oriental Research, Baghdad.

Cave-dwellers from the palaeolithic age.

R. J. Braidwood, *Sumer*, VII (1951), pp. 99-104 and *BASOR* 124 (1951), pp. 12-18.-H. E. Wright, Jr., *BASOR* 128 (1952), pp. 11-24.

158. 1951. BARDA BALKKA, see No. 151.

159. 1951. SHKAFT SHANIDAR.

October-December 1951 (56 days in all).

George G. Cameron. [Ralph S. Solecki].

The Iraq Government (Department of Antiquities, Baghdad) and the University of Michigan (Department of Near Eastern Studies).

1080 potsherds, 1689 items of flint \neq with Zarzi and Hazer Merd, but seems to contain four stages: two palaeolithic, one mesolithic, and one neolithic and proto-literate.

Ralph S. Solecki, *A Palaeolithic Site in the Zagros Mountains of Northern Iraq. Report on a sounding at Shanidar Cave I-II* (*Sumer* VIII 2 (1952), pp. 127-92; IX 1 (1953), pp. 60-93).

May-August 1953 (10 weeks).

Ralph S. Solecki.

The Iraq Government (Department of Antiquities, Baghdad) and the Smithsonian Institution, Washington.

Palaeolithic skeleton.

R. S. Solecki, *The Shanidar Cave Sounding, 1953 Season. With Notes concerning the Discovery of the First Palaeolithic Skeleton in Iraq* (*Sumer* IX 2, 1953).

160. 1953. SHKAFT SHANIDAR, see No. 159.

161. 29.1. 1954 ff. WARKA, see No. 9.

162. 1954 ff. THE GREATER ZÂB RIVER DRAINAGE BASIN (BARAK and HILJIYA caves, BABKHAL shelter and the mounds GIRD ALI AGHA, GIRD BANAHILK, GIRD CHAI, EL-KHAN, and MLEFAAT).

I.10.-15.11.1954.

Robert J. Braidwood. [Linda Braidwood, Vivian Broman, Patty Jo Watson, Bruce Howe, Herbert E. Wright, Jr., Fr. R. Matson, Ch. A. Reed, Hans Helbæk].

The Oriental Institute, Chicago, and the American School of Oriental Research, Baghdad.

Prehistoric caves and village sites.

Robert J. Braidwood, *The Iraq-Jarmo Project . . . Season 1954-1955* (*Sumer* X 2 1954).

SUPPLEMENT

As no excavations took place, we have placed the Assyrian rock-sculptures of Maltai and Bavian at the end.

MALTAI

- Rouet: 1845, see his letters dated 19.10., 3.11., and 17.11.1845 to Jules Mohl, accompanied by a plate designing the rock-sculptures, published in *Journal Asiatique* 4. sér., tome VII (1846), pp. 280–90.
- (A. H. Layard: September 1846, see his *Nineveh and its Remains* I² (1849), pp. 229–31).
- (T. S. Bell: 1851).
- Victor Place: March 1852, see his *Ninive et l'Assyrie* III (1867), Pl. 45; II (1870), pp. 153–60.
- C. F. Lehmann-Haupt: 1898–99, see his *Materialen zur älteren Geschichte Armeniens und Mesopotamiens* (1907; *Abhl. d. K. Gesell. d. Wiss. zu Göttingen*, Phil.-hist. Kl. N. F. Bd. IX:3), Taf. VII.
- (L. W. King: 1904, see his letter to Eduard Meyer dated 10.2.1914, published in *WVDOG* 52 (1927), pp. III–VI).
- W. Bachmann: May 1914, see his *Felsenreliefs in Assyrien. Bavian, Maltai und Gundük* (1927; *WVDOG* 52).
- The R. P. Nasse: November 1923, April 1924, see F. Thureau-Dangin, *Les sculptures rupestres de Maltaï* (RA XX1 (1924), pp. 185–97).

BAVIAN: CHINNIS

- (Rouet: 1845, see A. H. Layard, *Discoveries in the Ruins of Nineveh and Babylon* . . . (1853), p. 207*).
- (H. J. Ross: Winter 1846, see his report printed by A. H. Layard, *Nineveh and its Remains* II (1849), p. 142*).
- A. H. Layard: January 1850, see his *Discoveries in the Ruins of Nineveh and Babylon* . . . (1853), pp. 207–16 with 4 drawings by F. Cooper, and his *The Monuments of Nineveh* 2. series (1853), Pl. 51.
- (T. S. Bell: 1851).
- (Victor Place: *Ninive et l'Assyrie* II (1870), pp. 161–63).
- (L. W. King: 1904, see above: Maltai).
- W. Bachmann: May 1914, see above: Maltai.

INDEX

(see p. 341).

Abû Ḥabbah.....	60	Gird Ali Agha.....	162
Abû Ḥaṭab.....	79	Gird Banahilk.....	162
Abû Şahrain.....	34	Gird Chal.....	162
Adab.....	86	Girumu.....	128
Agrab.....	134	Grai Resh.....	136
‘Akar Kûf.....	140	Ḥarmal.....	10
Akshak.....	112	Ḥassûna.....	141
Al Hibbah.....	64	Hazer Merd.....	115
Al Uḥaimir.....	21	Hijîya.....	162
Arpachiyah.....	130	Jarmo.....	147
Assur.....	6	Ibrâhîm el-Ḥallî.....	12
Baasheika.....	4	Jemdet Nasr.....	107
Babkhal.....	162	Jerwân.....	132
Babylon.....	11	Imgur-Enlil.....	43
Balâwât.....	43	Jôkha.....	81
Baradost.....	153	Ishchall.....	133
Barak.....	162	Kakzu.....	129
Barda Balka.....	151	Ḳal’at Jarmo.....	147
Bavian.....	p. 382	Ḳal’at Sharḳât.....	6
Billah.....	4	Kalah.....	3
Birs Nimrûd.....	12	Kalhu.....	3
Bismâya.....	86	Kara Yitagh.....	145
Bismiyyah.....	86	Karîm Shahîr.....	155
Borsippa.....	12	Kâr-Tukulti-Ninurta.....	95
Chinnis.....	p. 382	Ḳaşr Shemâmok.....	129
Dair.....	58	Kaula Kandal.....	146
Delem.....	53	Khafâjah.....	124
Dêr.....	58	Khorsabad.....	2
Dilbat.....	53	Kidnûn.....	107
Dinkîm.....	10	Kish.....	21
Dreheim.....	105	Kisurra.....	79
Dûr-Kurigalzu.....	140	Kutalla.....	29
Dûr-Rîmush.....	133	Kutha.....	61
Dûr-Sharrukîn.....	2	Ḳuyûnjîḳ.....	1, 5
El-Khan.....	162	Lagash.....	39
Êrech.....	9	Larsa.....	28
Eridu.....	34	Makhmur.....	146
Eshnunna.....	123	Maltal.....	p. 382
Fara.....	78	Matarrah.....	145
Gawra.....	110	Medain.....	120
Gazur.....	106	M’lefaat.....	162
		Muḳayyar.....	27

Nabl Yûnus	15	Tell Asmar	123
Niffer	14	Tell Barghuthiât	128
Nimrûd	3	Tell Billah	4
Nineveh	1, 5, 15	Tell Dallam	53
Nippur	14	Tell Durallim	105
Nuffar	14	Tell Hassuna	141
Nuzi	106	Tell Ibrâhîm	61
Nuzu	106	Tell Ibrâhîm Bayls	146
Palegawra	157	Tell Koshi	137
Puzurish-Dagan	105	Tell Mohamined	10
Sâmarrâ	92	Tell-Lôh	39
Senkerek	28	Telloh	39
Shanidar	159	Tell Sîfr	29
Sherif Khân	16	Tell 'Ukair	138
Shibanba	4	Tell 'Umalr	112
Shkaft Shanidar	159	Tepe Gawra	110
Shuruppak	78	Tepe Shenshi	131
Sinkara	28	Tulûl Al 'Aqîr	95
Sippar	60	Tupliash	124
Surghûl	63	Ubald	101
Tarbisu	16	'Ukair	138
Tell Abû Harmal	10	Umina	82
Tell Agrab	134	Ur	27
Tell Aqrah	146	Uruk	9
Tell Al Dhlba'l	144	Warka	9
Tell Al Laham	33	Yorgan Tepe	106
Tell Al 'Ubald	101	Zarzi	115
Tell Arpachiyah	130		

THE PREHISTORY OF IRAQ

§ 1. As founder of the systematic study of the European Palaeolithic Jacques Boucher de Crèvecœur de Perthes (1788–1868) must be mentioned. As early as 1838 he submitted to the Société d'émulation at Abbeville his first collections of palaeolithic stone implements, but it was his excavations in 1847 (published 1849) in the Somme valley of pits of the Porte du Bois, Abbeville, which laid the foundations of better insight into French prehistory. T. Fuhrmann's finding in 1856 of prehistoric human remains at Neanderthal near Düsseldorf further stimulated the interest of the investigators, and in 1867 L. L. G. de Mortillet (1821–1898), keeper of the museum at St. Germain from 1868, organised the first French prehistoric exhibition. In Mortillet's time the investigation area was extended to several other French river valleys, thus to the Vézère valley in Dordogne. Mortillet grouped the material found according to the kind of implements in a number of different groups named after the finding-place. In his museum-guides Mortillet drew up the following chronological sequence for the French prehistoric cultures: Chellean, Acheulian, Mousterian, Aurignacian, Solutrian, and Magdalenian.

Since Mortillet's death archaeologists in all countries have worked on the gradually increasing material from practically all European state territories while the Palaeolithic of Africa and Asia as well has been thoroughly searched for and excavated. Among the numerous investigators who have increased our knowledge since Mortillet's time only those whose work has been epoch-making is to be mentioned here: H. Breuil (1912, 1939), V. Commont (1913), S. H. Warren (1922, 1933, 1934), who each in his way have contributed to a new understanding of the Core and Flake industries, while the Aurignac cultures, as well as the Blade industries as a whole have been investigated by E. Vignard (1923), R. Vaufrey (1928), Denis Peyrony (1933).

and Dorothy A. E. Garrod (1926, 1930, 1937, 1938, 1942). The chronological conditions within prehistory have been investigated in detail by F. E. Zeuner (1946, 1952).

In order to place the prehistory of Iraq, as is the purpose of this chapter, we have made a survey in schematic form (at the end of the vol.), which is based on the experiences gained so far within the prehistoric study. However, it is necessary that the survey should be accompanied by some remarks besides characterisations of the flint industries which in our mention of the prehistory of Iraq will be of special importance, as the survey itself does not leave room for them.

§ 2. Commentary on our prehistoric schematic synopsis at the end of the vol.: (1) The dates of the geological periods are approximate. As to the Meso- and Neolithic it is very difficult to secure a chronological correlation within these periods between Europe and the Near and Middle East, apart from the fact that the difference in time e. g. between North and Central Europe and the Mediterranean countries is stamped by the fact that the former area was subject to as many as four glaciations. Even if this fact is taken into consideration, it should be mentioned that Meiendorf (from Magdalenian times) must be dated at about 13,000, and that therefore it is doubtful whether the beginning of the Postglacial Age can rightly be put at 22,000.

(2) Question marks after dates, as mentioned above, or after names of industries indicate uncertainty in the evaluation of the material.

(3) The arrows indicate either influences proceeding from this or that centre of industry or a natural progressive development; dashed arrows indicate that a connexion has not been proved with certainty. Lines with arrowheads at both ends denote mutual influence, and M = an industry greatly characterised by microliths among the large number of Upper Palaeolithic industries.

(4) The industries of the Mesolithic are as a rule all characterised by 1. microliths, 2. the tranchet technique, and 3. the working of bone and antler.

(5) Prehistoric material from South Africa, Kenya, Uganda, Java, and China has not been included in the synopsis.

(6) The cultures or industries printed on the same horizontal line are supposed to be coeval; still, it should be expressly stated that the exact placing of the Natufian in the Mesolithic as well as the chronolo-

gical correlations which by way of experiment have been applied under the Neolithic dare not claim to be more than tentative. In the Neolithic Gudenaa is an inland culture, Ertebølle a coastal culture.

(7) In square brackets after the name of the industry important finding-places are indicated here and there; omission always of Palestine in the case of Mt. Carmel.

(8) The industries of early man are on the basis of the finds of implements classed in three main groups: Core, Flake, and Blade industries. Another name for the first group is Hand-axe (or Biface) culture, but the French term *Coup-de-poing* culture is the best. The Flake industry from the period Clactonian II?–Levalloisian II–Mousterian I on is also termed Hand-point culture.—The distinction between Core and Flake industries is purely conventional since both cores and flakes were used for the manufacture of implements in nearly all industries. We know four kinds of technique used for the manufacture of implements during Lower and Middle Pleistocene: (a) The “hammer-stone” technique: flakes were removed from a nodule or pebble with the aid of a hammer-stone (pebble-tools, *Coup-de-poing* culture). (b) The “block-on-block” technique: the manufacturer swings a lump of rock against a stone anvil (Clactonian industries). (c) The “cylinder-hammer” technique, which made it possible to remove flatter flakes from a core by using the side of a cylindrical hammer made of bone or hard wood (Acheulian stage). (d) The “prepared core” technique, a term which in 1947 at the First Pan-African Congress on Prehistory, Nairobi, was replaced by the term “faceted platform” technique; the latter term is now used by a number of scholars instead of Levalloisian technique.—Finally it should be mentioned that what was previously termed the Levalloisian culture, and as such entered in our prehistoric schematic synopsis, and where in the old definition hand-axe elements are absent, perhaps only denotes one of two basic flaking techniques, but no special culture, according to Fr. Bordes (1951) and H. L. Movius (1953).

(9) Characterisation of implements in outline of significant industries from the Upper Palaeolithic with a view to the prehistory of Iraq (alphabetically):

Aterian: triangular points with bulbar face flaking at the base, bifacial points, tanged arrow-heads, racloirs (associated with burins and end-scrapers), a peculiar tanged point (\neq Gravette).

Atlitian: steep scrapers, polyhedric burins, Châtelperron points (\neq Gravette).

Aurignac proper: Middle Aurignacian: keeled scrapers, nose-scrapers, beaked burins, split-base bone point. The types $<$ cores and a consequent development of a fluting technique. Pierre Teilhard de Chardin (1924) assumes that this industry was developed from a Core industry from the Iranian plateau or further east (the Shuitung-kou river, North China).

Châtelperronian (Lower Aurignacian): Châtelperron points, end-scrapers, blunted-back blades, burins.

Gravettian: the Lower Gravettian lacks microliths, but microlithic lunates and micro-burins are found in the Lower Capsian as well as in the Upper Gravettian (besides in the European Mesolithic Tardenoisian). But apart from the microliths both Gravettian industries may be characterised by: Gravette points, tanged and shouldered points, small notched blades, triangles, small blunted-back blades, female statuettes.

Magdalenian: a highly specialised local development of Aurignac, eventually influence from the East; six stages.

Sébilian: diminutive Levallois cores, small truncate flakes, bifacial points.

(10) The question of the relation between the large number of industries and the human races has during the last century given rise to a wealth of learned works and papers. The situation today seems to be as follows: the bearers of the Flake industries in Interstadial I (Upper Palaeolithic) clearly belonged to the race *Homo neanderthalensis*, just as the Aurignacian Blade industries in the Upper Palaeolithic were due to *Homo sapiens* both in Interstadial I and Interstadial II. Furthermore *Homo sapiens* from Würm Glaciation 3 on is the only dominant human race within the area covered by our synopsis. It is a different matter that *Homo sapiens* in various places has been found with a Neanderthal strain, thus we find in the Skhul cave of Mt. Carmel a hybrid type, just as Crô-Magnon Man, one of the four (five) *Homo sapiens* types from the Upper Palaeolithic, shows an admixture of some Neanderthal blood. We cannot tell how old is the incipient mixture of these two main races.—Some scholars, e. g. L. S. B. Leakey, are of opinion that *Homo sapiens* was the bearer of the Core industries as well as one of the earliest Flake industries, but the argument is

based on the Swanscombe (Kent) find only—the Piltdown Man, as is well-known, has been shown up as a hoax—where the objects found refer us to Acheulian as well as Clactonian culture. Provisionally we should however, be reserved; a single find is too little. As to the finding in 1932 of the *Homo sapiens*-like Kanam mandible in Kenya, the dating at the Lower Pleistocene period is not certain, but it seems that the Kanjera skull fragments (Kenya), which also show pronounced *Homo sapiens* traits, may be referred with certainty to the Middle Pleistocene.—It is more interesting that two crania of *Homo sapiens* from the 3rd Interglacial period were found a couple of years after World War II at Fontéchevade (Charente, France) in a culture which is associated with the Tayacian Flake industry. This is important as *Homo sapiens* otherwise stands as the bearer of the Blade industries.—Four (five) groups of *Homo sapiens* are known from the Upper Palaeolithic: 1. Combe Capelle Man (Lower Aurignacian); 2. Grimaldi negroids (Upper Aurignacian); 3. Crô-Magnon Man (two races: the dolichocephalic eastern or Předměst type and the western brachycephalic Crô-Magnon proper from Gorge d'Enfer, Crô-Magnon in the Vézère valley), who is known from the following industries: Upper Aurignacian, Solutrian, and Magdalenian; 4. Chancelade Man (Magdalenian); and 5. Châtelperron Man, but this skull is not dated geologically.—As to early man in the Lower and Middle Palaeolithic we can only presume that the people of the Core industries were vegetable and grub gatherers, and that in the Lower Palaeolithic the people of the Flake industries were forest people, who in the Middle Palaeolithic developed into hunters. As late as the Mesolithic the people were collectors, hunters, and fishermen, too; only the Palestinian Natufians seem to have been food-producers. Otherwise we do not find these until the Neolithic, cp. in Iraq the primary peasant efficiency with permanent villages (Jarmo, Hassuna, Matarrah), which later were replaced by established farmers with market-towns and temples (Ubad).

§ 3. It must be accidental that our insight into Mesopotamian pre-history is still only represented by some few finding-places, for about 100,000 years ago the climatic conditions were of a character somewhat different from that of our day. Nowadays the region between lat. 25° and lat. 35° north from the Atlantic to the Indus constitutes

one of the warmest and driest zones of the earth, which suffers from so great a deficiency in rain that this large area is practically uninhabitable outside the large river valleys and the tracts near the irrigation channels drained off from these. The Atlantic cyclones, which water North and Central Europe only reach the Mediterranean in winter, but not the Sahara. The winter gales indeed reach Mesopotamia, but the rain has been drained off by crossing the highlands of Palestine-Syria, and east of these the precipitation is therefore insufficient except in a narrow zone of North Syria.

In palaeolithic times, when Northern Europe was glaciated as far as the Harz, while the Alps were covered by huge glaciers, the Atlantic rainstorms were turned towards the south as a consequence of the Arctic high pressure. The cyclones were deflected towards the south-east across the Mediterranean to the northern Sahara and continued undrained by Lebanon over Mesopotamia farther east. The rainfall in Mesopotamia was relatively abundant and distributed over the whole year. North Syria (the Habur region), the Iraqi Sinjar region and the later Assyria were then a mixture of a grassland and mixed woodland, the natural resources of which: rainfall, rivers, stone, and timber, made it suitable for sustaining a relatively large population. At the same time it should be kept in mind that Mesopotamia in prehistoric times was of smaller extent (see Chapter I), the borderline between land and sea, the later Persian Gulf, then being on a line between Hit and Samarra.

§ 4. The first palaeolithic finding-places in Mesopotamia were ascertained to occur in 1928 (publ. 1930) by Dorothy A. E. Garrod: Hazer Merd¹ (West Cave) and Zarzi, two caves, the former situated immediately southwest of Sulaimaniyah, the latter about 30 miles northwest of the town; to these were later added the findings of Barda Balka (1949), Palegawra (1951), both situated on the Chemehemal Plain (Kirkuk Liwâ), and Shkast Shanidar (1951) near the Greater Zâb river between Zibar and Mergassur, northwest of Rowanduz; Palegawra and Shanidar are caves. On the other hand we leave R. S. Solecki's²

¹ As to the finding-place Hazer Merd as well as all the excavation sites mentioned in what follows in the present chapter, reference is made once and for all to Chapter VI C., at the end of which there is an alphabetical index (pp. 383-84).

² *Sumer* X 1 (1954), pp. 62-72.

and Robert J. Braidwood's¹ finds from 1953 and 1954, respectively, out of consideration as detailed descriptions are missing. Soleeki's finds are: Dukan Cave, about 9 miles north of Zarzi, and Tar Kshaife near Al 'Uḥaiḍir, a site, not a cave, where a Levalloiso-Mousterian Flake technique was found to occur; as for Braidwood's finds we refer the reader to Chapter VI C. No. 162; the oldest shelter (Babkhal) has affinities with the Zarzi and perhaps with the Hazer Merd industries²; M'lefaat is perhaps a pre-Jarmo assemblage.—The above-mentioned five cave findings were made in the mountainous region of Kurdistan, Barda Balka and Palegawra, more exactly determined, on the foothills of Sagirrma Dagħ, a northern spur of the Zagros Mountains.

The oldest finding-place by far is Barda Balka; the site was a gravel layer containing coarse hand-axes (Core industry) and flake tools, besides limestone tools and remains of fossil elephant and rhino. As far as we can decide, the industry is of the type Acheulio-Levalloisian; if we dare to use corresponding European datings we are led to Riss Glaciation 2 or to 3rd Interglacial, i.e. to the end of the Middle Palaeolithic or the beginning of the Upper Palaeolithic as regards the existence of human beings living in Iraq.

The next oldest sites are Hazer Merd (apart from top layers) and Shanidar D: the assemblage displays a Flake industry of the type Upper Levalloiso-Mousterian; objects found in the two places are good parallels, but flints and other chipped stone artifacts show deviations from the European Upper Levalloiso-Mousterian, whereas good affinities are established with the Palestinian, which is dated at Würm 1: Mount Carmel, Tabun B. That Hazer Merd is older than Shanidar D seems to appear from the finding of two hand-axes which refer us to a Core industry (see above: Barda Balka). In the first report on Barda Balka it was pointed out that a Mousterian element was found in the assemblage; presumably this was a mistake for Levalloisian.

A characteristic Blade industry with microliths was found to occur at Hazer Merd (top layer), Shanidar C, Zarzi, and Palegawra. Typologically this may be determined as Upper Aurignacian II: Upper Gravettian in the case of Hazer Merd and Zarzi. Zarzi and Palegawra, which are the latest (the latter being later than the former) are characteristic by the fact that all artifacts are of flint, including blade tools of the

¹ *Sumer* X 2 (1954), pp. 120–38.

² *Ibid.* X 2 (1954), pp. 127 f., 132.

Grimaldi II type (Magdalenian period) and microliths; Zarzi, however, also shows Grimaldi I types, but the assemblage of Hazer Merd (top layer) is earlier. In Shanidar C Gravette blades are absent, whereas small deeply notched blades as in Gravettian were found, just as one single-shouldered point, which is known from European Gravettian; from Shanidar C we finally know Abri Audi points, which typologically take us to Lower Aurignacian, but even though we must be very wary in making statements on the Mesopotamian Palaeolithic, two things seem to have appeared from the investigations of the Blade industries: (1) The relation to Palestine which was ascertained in the Flake industries of Hazer Merd and Shanidar D was not maintained, as in Palestine Aurignac proper is universal and the two Gravettian Aurignac cultures which characterise the Mesopotamian Blade industries are not known from Palestine; (2) Shanidar C seems to be the earliest among the Blade industries in Iraq.

If we disregard Shanidar C, it seems that the Blade assemblages in relative chronology should be referred to Interstadial II or Würm 3; considerably later according to R. J. Braidwood,¹ who dates the Zarzi-Palegawra materials to 10,000 B.C. and adds: "probably earlier than the Natufian phase in Palestine." But this is probably too late, so that we have got into the Mesolithic. It should be kept in mind, partly that the top layer of Zarzi typologically is Tardenoisian, so that the main assemblage of Zarzi consequently is seen to be earlier, partly that the Hazer Merd and Zarzi Blade industries have their closest typological parallels at Willendorf (Austria), Kostenki I (Don, Russia), and Gargariño (ibid.), all assemblages being dated at Interstadial II.

It is always a risky matter to speak about influence from and relation to other palaeolithic cultures, even in a restricted African or European area; still, our arrows in our prehistoric synopsis have tried to indicate the results of research. When we are in the Kurdish mountains, the matter is still more risky; but I mention in what follows what has been ascertained in the Mesopotamian Palaeolithic: I. a Core + Flake industry (Barda Balka, Hazer Merd: mainly flake assemblage + two hand-axes), II. Flake industries (Hazer Merd, Shanidar D), III. Blade industries (Shanidar C, Hazer Merd: top layer, Zarzi, Palegawra). Furthermore that II. has Palestinian, and III. has South Russian parallels, both western. We have no other Palaeolithic ex-

¹ *The Near East and the Foundations for Civilization* (1952), p. 26.

periences in relation to I., but we shall remind of the fact that the Châtelperronian industry seems to have arisen through experiences gained from Core as well as Flake cultures, and that the Aurignac proper perhaps has arisen from an eastern (Iranian, Chinese) Core industry, which has migrated towards the west. If the latter hypothesis, which was mentioned above, p. 388, is correct, does the Mesopotamian Palaeolithic I. show influence from the east, as the Iranian Core culture must have passed Mesopotamia when the Aurignac proper appeared in Syria, Jordan, Palestine, and East Central Europe. The Mesopotamian Palaeolithic II. and III., on the other hand, may show

Iraq

		I. Core Industry	II. Flake Industry	III. Blade Industry
Upper Palaeolithicum	Würm Glaciation 3			{ Palegawra Zarzi Hazer Merd (top layer) (Upper Aurignacian)
	Interstadial II			
	Würm Glaciation 2			{ Shanidar C (Lower Aurignacian?)
	Interstadial I			
	Würm Glaciation 1		{ Shanidar D Hazer Merd (Upper Levallois- Mousterian)	
Middle Palaeolithicum	3. Interglacial Riss Glaciation 2	{ Barda Balka ¹ (Acheulio- Levalloisian)		

¹ It is possible that Barda Balka (and consequently the other four sites in this synopsis) should be placed chronologically later; cf. Herbert E. Wright, Jr., *The Geological Setting of Four Prehistoric Sites in Northeastern Iraq*, p. 22 (*BASOR* 128, December 1952), who dates Barda Balka in European correlation to the Würm Glaciation.

influence from the west (Palestine, South Russian Don area).—A synoptic plan is found on p. 393.

A comparison with our synopsis of the archaeological results from the Quaternary Age, to which Europe has made most contributions in spite of four glaciations, shows that the contribution of Iraq to our knowledge of the Palaeolithic is still very modest. But apart from the fact that it is 28 years since Dorothy A. E. Garrod found the Hazer Merd and Zarzi caves, the explorations of the last five years alone have more than doubled the original total, and now that attention has been aroused through the work of Robert J. Braidwood, Bruce Howe, Herbert E. Wright, Jr., and R. S. Solecki, we dare look forward to an extension of the finding-places as time passes, and hence of our experience and insight.

This is also needed, especially as it is difficult for us to bridge the gap between the Upper Palaeolithic industries and the great wealth of Neolithic cultures of Iraq. Thus, as regards the Mesolithic, in which microliths predominate, our knowledge of this period in Mesopotamia is restricted to two facts: (1) The top layer of Zarzi is typologically Tardenoisian, (2) the four layers of Shanidar seem to indicate a constant settlement of this cave from Mousterian to Proto-literate times. One would think that we had here got the solution presented to us, but problems just arise on this decisive point. The Shanidar layers are, from top to bottom:

A. Proto-literate historical time.

Neolithic material in the bottom part.

B. A Mesolithic component; but its relation to A. and C. is doubtful.

C. Lower? or Upper Aurignacian partly parallel to Zarzi.

D. Upper Levallois-Mousterian, parallel to Hazer Merd.

Palaeolithically Shanidar within its bounds contains artifact types combining both occupational ranges of the Hazer Merd and the Zarzi caves. The stone implements in Shanidar B and C have parallels in Palegawra, Karīm Shāhir, and Ḳal'at Jarmo. On the last two localities see below; they are neolithic settlements. But this does not prove anything as we hardly dare suppose that the same people (and its descendants) inhabited Shanidar right from Mousterian time on. On the contrary we take it for granted that the Shanidar cave had changing settlement from Würm 1 on. Therefore it causes great difficulty

that a connexion down in time between Shanidar C and B cannot be established. The Mesolithic of Shanidar B is parallel to the Natufian, but lacks the polished and serrated flint sickle blades which among the Natufians are considered evidence of incipient agriculture. Therefore we must consider early man in Shanidar B to be at the food-gathering stage, just as we are unable to consider the Neolithic of Shanidar A a further development of the Mesolithic of Shanidar B.

The use of flint artifacts, which is one of the characteristics of the European Palaeolithic, is of a more modest kind in the Near and Middle East for many and good, obvious reasons. Therefore it is interesting that the Zarzi-Palegawra assemblage exclusively shows flint artifacts, which supports the above-mentioned hypothesis about European influence (the Don area). Still the term: artifacts or items of flints is often used in publications, but then commented upon. Thus during the 56 days of excavation at Shkaft Shanidar a total of 2769 artifacts were brought to light: 1080 pottery sherds, 1689 items of flint. Solecki¹ remarks that only 407 were worked flints, while 1247 of the 1689 items of flints were chipped stone (jasper, chalcedony, obsidian) artifacts, 11 worked bone, and 24 rough and polished stones.

§ 5. Thus it is hardly wrong to say that in Mesopotamia we cannot ascertain connected cultural periods until the neolithic period. In what precedes we have seen little, but secure evidence that the region was inhabited by roaming hunters and food-gatherers probably from Middle, and with certainty from Upper Palaeolithic times. But not until the Neolithic do we find food-producing man, permanent villages, and pottery, whether we are in Europe, Africa, or Asia. Before we survey the cultural development from the Mesopotamian Neolithic to the historical periods of the Early Dynastic times, we must, however, premise some important remarks of importance for the rest of this chapter.

(1) The next oldest neolithic settlement in Mesopotamia is Kal'at Jarmo, which has been dated through three radioactive carbon dates:² 4758 ± 320 , 4654 ± 340 , and 4743 ± 360 , i.e. that if we take the

¹ *Sumer* VIII 2 (1952), p. 142.

² Cf. J. R. Arnold and W. F. Libby, *Radiocarbon Dates* (1950); H. L. Movius, *Age Determination by Radiocarbon Content* (*Antiquity* XXIV, 1950); D. M. Gates, *Dating of Archaeological Materials by Means of Radioactive Carbon* (*Southwestern Lore* XVI, 1950).

highest possibility in both cases we get to about 5100 B.C. In consideration of all that according to the results of the numerous excavations happened in Mesopotamia until about 2460, when Ur I and the Ur-Nina Dynasty at Lagash started, the Jarmo figure seems rather low. But it is our only fixed starting point, which we shall use in what follows until future tests and new investigations may establish whether we ought to reject radioactive carbon dates or not.

(2) About the year 3000, as mentioned in Chapter I, the country Mesopotamia extended far into the Persian Gulf, alluvial soil having been deposited by the Euphrates and the Tigris and their tributaries through numerous millennia: South Mesopotamia had come into existence. The border-line between land and sea had since palaeolithic time been moved far south, from Hit and Samarra to the line denoted by the famous ancient towns of Eridu, Ur, and Lagash, which about 3000 were situated near the sea. As all traces of palaeolithic human life in Mesopotamia have been found in northeastern Iraq, the southern alluvial land reclamation, which millennium by millennium has become greater and greater, means that in the Neolithic we must assume that South Mesopotamia was theoretically inhabitable. That this is true will appear from our following comment on the neolithic Eridu and Ubaid culture. The problem presenting itself then is this: did the inhabitants of South Mesopotamia come from North Mesopotamia, from the East or from the West? That a no doubt peaceful invasion took place is evident from the fact that the area to begin with was uninhabitable because of the moist soil. South Mesopotamia is open and unprotected in all directions; only the sea in the south might be a natural defence line, but Berossus' Oannes legend seems to show that invasion from this direction was also possible.

(3) In Mesopotamian prehistory, before the evidence of written sources, the study of a number of pottery industries have played a weighty argumentative part. And for natural reasons. Excavation sites where temples and other monumental buildings are missing, are often characterised through the kitchen utensils only, as the rest of the implement culture mostly is little varying from settlement to settlement. However, it may be stated here that the start as regards Mesopotamian pottery was unfortunate. The French expedition to Persia led by J. de Morgan at Susa found extremely beautifully formed pottery

(publ. 1900, 1912), which also, as regards colours and decoration to this day belongs to the finest visual objects of the Louvre Museum. Ed. Pot-
 tier (1912) tried in great visions to synthesise the Susan as well as all
 other extra-Iranian painted pottery wares then known into a connected
 cultural zone. When after 1918 painted pottery then was found to occur
 on Mesopotamian sites such as Tell Al 'Ubaid, Ur, and Jemdet Nasr,
 Henri Frankfort attempted partly to define the relation between Susan
 and Mesopotamian painted pottery, partly on the basis of the different
 pottery wares in Mesopotamia to distinguish between various cultural
 phases and ethnological and linguistic dissimilarities. Frankfort's
Studies in Early Pottery of the Near East (1924-27, 2 vols.) was epoch-
 making and, for its time, was an extraordinarily important and
 distinguished work, but in the light of the later excavations its limita-
 tion and misleading basic point of view is realised. In the first place
 because the colourful and often very beautiful Mesopotamian painted
 pottery (e. g. Arpachiyah) often made the investigators overlook the
 more modest pottery, the importance of which to an internal under-
 standing of the cultural development is often much greater (see p. 329),
 an error which, however, has been remedied by posterity. Secondly be-
 cause the distribution of the types of pottery on different cultures and
 peoples in actual fact was a really hampering hypothesis. For we now
 know between ten and twenty different types of pottery, and if these were
 to denote as many different "cultures" or invasions of foreign peoples in
 Mesopotamia, I think that Assyriology got more to think of than it
 could manage, while at the same time the above-mentioned large
 number of types of Mesopotamian pottery in itself is a warning against
 the supposition of the existence of as many changes of peoples. Things
 now rest on quite a different foundation, and connexion, continuity,
 is now the guiding star we are following. Of course the old problems
 constantly crop up: partly the relation between Sumerians and Semites,
 partly the relation of these two ethnically as well as linguistically
 different peoples to possible autochthonous inhabitants of Mesopotamia;
 also the North Syrian Subarians later settled in North Mesopotamia
 get into the spotlight. But the violent dividing lines of previous research,
 according to which e. g. the Uruk pottery should represent the arrival
 of the Sumerians (Thorkild Jacobsen 1936), the painted pottery of
 Jemdet Nasr that of the Semites (H. Frankfort 1924-27), can no longer
 be accepted.

§ 6. The names of Karīm Shāhir and Ḳal'at Jarmo denote the oldest and next oldest neolithic settlement finds of Mesopotamia. These localities are situated near each other on the Chemchemal Plain (Kirkuk Liwā). Karīm Shāhir was an open site, and the materials came from what was essentially a single stratum of about two acres of area. Findings of large concentrations of erratic stones seem to indicate some form of architectural arrangement. Besides a flint industry with a large microlithic complement was found which amongst other things displayed a few sickle blades, some chipped celts, some of which with polished bits. The ground stone industry included mortars, milling-stone fragments, beads, pendants, and bracelets. As regards bones, more than fifty per cent. originated from potentially domesticable sheep, goat, pig, and an equid.

It cannot be decided whether the Karīm Shāhir people were conscious food-producers; the sickle blades only show that they cut off what had germinated, perhaps wild-growing, graniferous grasses; mortars and milling-stone fragments furthermore suggest that the cut-off grains have served for food; but we do not get any farther. The difference between conscious reaping as a result of conscious sowing and gathering of wild-growing grain cannot be emphasised too much. Perhaps these people had domestic animals, thus being a kind of peasant nomads. Typologically no connexion is seen as regards implement culture with the next oldest neolithic settlement in Mesopotamia, Ḳal'at Jarmo, any more than to the earlier Upper Gravettian industry of Zarzi-Palegawra. Braidwood's¹ dating of Karīm Shāhir at about 6000 B.C. thus only indicates non-connexion with Jarmo.

In what precedes we have several times mentioned Ḳal'at Jarmo as the next oldest neolithic settlement of Mesopotamia and thus have taken a standpoint which is not shared by everybody and which strictly is still based on an estimate. This will be discussed in more detail after the site and its artifacts have been described. Jarmo is situated on a kind of natural promontory rising 50 m above the *wādi* bed, formed by deep *wādi* cuttings. The area is 90 × 140 m, the depth of débris 5–6 m. Before the excavations it had presented itself as a grassy terrace of top soil of decomposing sandstone. The situation is on the foothills of the Sagirrma mountain-range, a northern spur of the Zagros Mountains. The excavation expedition excavated an area

¹ *The Near East* ... (1952), p. 26.

of 7×10 m to a depth of $3\frac{1}{2}$ m, and then 8 square m were excavated down to virgin soil (bed-rock). 8 floor levels were found; perhaps some of these should be divided into several intermediate levels. The assemblage was essentially consistent throughout the total depth, except in the matter of potsherds.

Beginning with the lowest, oldest levels the results are as follows:¹ in the two lowest levels no rests of buildings were traced, but in Level 7 a flint sickle was found, in Level 8 yellow alabaster earthenware, but no pottery or pottery sherds. This shows that stone vessels were used before pottery was invented and that the Jarimo people almost at the beginning of their settled life cut off grasses. In Level 6 remains of houses of *pisé* (packed mud) were found: the upper parts of the wall butts of a building: two fair-sized rooms and suggestions of two or three more rooms, connecting doors; the floor of one room bore the traces of seeds. Findings of querns and hand grinders besides oven-places and husking-trays perhaps extend our insight into a food-producing community. Crumbling rests of inportable pottery show that this has now come into existence, in Level 5 e. g. as an elliptical baked-in-place clay basin (50 cm. in diameter) built into a basin-shaped hole in the floor, facing it with clay. From Cyprus Neolithic I and Jericho IX² we know similar inportable basins. Level 5 further shows fragments of *pisé* walls. While Levels 3-4 were only test-excavated, incomplete runs of *pisé* walling with a corner or two were found in Level 2, so that we dare conclude that the houses were constructed rectilinearly; the wall foundations were cobble-stone pavings (thus also in Level 1). The pottery of Level 2 is a yellow polished earthenware decorated with red bands, in Level 1 a coarse hand-made red pottery with traces of chaff temper, incompletely fired, 25 per cent. red surface solution and burnish marks. Finally we may from Level 1 mention several fragments of bitumen-surfaced hearths besides fragments of stone and bitumen flooring.

Among the objects found we shall mention: from Level 6 about

¹ Cf. R. J. Braidwood, *Antiquity* XXIV (1950), pp. 189-95.

² Jericho still seems to be the earliest known finding-place in the Near East, as we there within 18 layers distinguish between (cf. J. Garstang, *AAA* XXII-XXIII, 1935-36):

XVIII ff. Natufian (?) Mesolithic

XVII-IX Early Neolithic ("Jerichoan I" = Neuville's Tahunian II)

VIII Late Neolithic and Early Chalcolithic (Ghassullian)

VII-1 Early Bronze Age (Canaanite).

4000 items of flint and obsidian, 60 per cent. are microliths of a monotone aspect: sickle, blades, borers, scrapers. Furthermore, stone tools, etc., such as: querns, hand-rubbers, boulder mortars, pestles, discs probably used to steady the movements of the spindle, bowls with coloured veins of marble-like stones which appear as a sort of banding; full ground celts, axes, adzes, a phallus, beads, bracelets, stone pegs or nails, animal figures. Whereas no utilitarian objects are made of baked clay, we find in this material: small clay cones, bulla-like blobs, figurines (animals in Level 2, human heads, seated "mother goddess"); furthermore, many bone implements: awls, needles, gorget fragments. Finally, animal bones of sheep, goat, ox, and pig; land snails from all levels, especially from Levels 8 and 7, which suggests an open grassland with shrubs, but without trees; grain: two species of wheat, a barley, furthermore peas and a variety of pistacia; carbon; flexed burials, no grave-goods.

These most important finds perhaps as a result may give the following picture: the first known permanent village (cf. the 8 levels) in Mesopotamia, the inhabitants of which probably were consciously food-producing; previously known food-producers are the Natufians of Mount Carmel and the Capsian Ibero-Maurusians (Coast of Africa), both from the Mesolithic. Furthermore we see that domestic animals were bred; a large number of the sheep and goat teeth are those of yearlings, not a typical hunting object. Lack of spindle whorls sets the problem of clothes, after the problem of nutrition has been solved, since it is cold at Jarmo when the sun is not shining, as I know from personal experience. But the presence of obsidian, which originates from the provinces within the state territory of the present Turkey, shows that the inhabitants of Jarmo have lived in an "area of general trading intercommunication of their time."¹ The more strange is it that the Jarmo flint and pottery, as well as stone vessel industries, are unparalleled in Mesopotamia; the Zarzi cave is situated only 15 miles away, and the Hassuna pottery and other items of this assemblage, on which see further below, have been found in the Rowanduz area at Baradost II a-b (Hassuna plain and "standard" ware) as well as on the Makhmur plain between the two Zâb rivers (flints: Tell Ibrâhim Bayis); at Hazer Merd (Eastern Cave: cf. Hassuna archaic burnished ware); and as surface finds (potsherds) near Chemchemal.

¹ R. M. Adams, see R. J. Braidwood and Linda Braidwood, *Journal of World History* 1 (1953), p. 302.

Therefore Jarmo cannot be considered as "the starting point of the established sequence of Mesopotamian cultures,"¹ but in return it can hardly be supposed to be a backwater culture² geographically and chronologically; especially the use, before the invention of pottery, of stone vessels, which is unknown from Hassuna, carries great weight. A similar cultural stage is only known from out of Mesopotamia: Jericho (before IX: X-XVII); Mersin, Lower Neolithic B; Ugarit V; and Cyprus Neolithic I (Khirokitia, Petra tou Limniti, Bellapaise): no pottery invented and use (or no use: Mersin) of stone vessels. Furthermore, a connexion can be established within the Mesopotamian settlement findings in the case of Jarmo, and that back in time, not forward. The small backed blades from the lower levels of Jarmo have parallels in Palegawra, Karim Shahr and Shanidar B, which is a Mesolithic; it is interesting here to note that the neolithic layer of Shanidar A has pottery affinities both to Baradost I, earlier than Hassuna-Baradost (II a-b) and to Mersin Neolithic (\neq Hassuna I a). Finally it should be mentioned that according to Braidwood's field assistant at Jarmo, R. M. Adams, certain unpublished Hassuna pottery from Level I a (the lowest) is parallel to the coarse red pottery of Jarmo Level 1 (uppermost level). A comparison shows that Jarmo is earlier than Hassuna, besides that the use of obsidian and such names as Jericho, Mersin, Ugarit, and Cyprus point towards the west, the geographical place from where much earlier the Aurignac culture which we call Upper Gravettian seems to have spread to the Iraqi finding-places Hazer Merd, Zarzi, and Palegawra, just as (see p. 391) Shanidar D and Hazer Merd referred to Palestinian Upper Levalloiso-Mousterian. Downwards in time, as a link in the Mesopotamian cultural sequence, on the other hand, we cannot place Jarmo any more than Karim Shahr, nor can we connect these two localities, only that we realise that Karim Shahr is the earlier of the two.

§ 7. The first cuts of the spade during the Hassuna excavations rang in 1943 (publ. 1945), this being the introduction to a revaluation of the prehistory of Mesopotamia. There had been portents such as the Nineveh I Pottery (1931-32; publ. 1933) and the painted pottery of

¹ V. Gordon Childe, *New Light on the Most Ancient East* (1954), p. 105.

² The expression is that of the then still somewhat hesitant Braidwood in *Antiquity* XXIV (1950), pp. 189-95; in *JNES* XI (1952), p. 66, and *Journal of World History* I (1953), p. 303, on the other hand, he definitely goes in for the view that Jarmo is earlier than Hassuna.

Arpaehiyah (1933; publ. 1935); but these two wares could not then be correctly placed within Mesopotamian archaeology. The old nomenclature for Mesopotamian prehistory, which the 18. International Congress of Orientalists at Leiden had adopted in 1931 was a simple tripartition into the Ubaid-Uruk-Jemdet Nasr cultures and was based on South Mesopotamian findings from the period 1918-30: R. Campbell Thompson's surface findings 1918 at Abû Shahrain (Eridu) of Susa I-like painted pottery; the excavations at Tell Al 'Ubaid 1919, 1923-24; at Ur, where especially Sir Leonard Woolley's shaft digging, the 60 feet deep Flood Pit, in Season 1929-30 showed the above-mentioned pottery sequence; besides the Jemdet Nasr findings from 1925-26. The weakness of the proposition of the Congress was that only South Mesopotamian material entered in it.

The Hassuna excavations threw more light on things, a new, much more comprehensive sequence came into existence. There are still many problems; the Hassuna publication (1945) is only ten years old, and it is still impossible without objections to interpret the very large material that has been published since 1920. Probably the relation between South and North Mesopotamia especially will for some time be difficult to unravel; the results of the Eridu excavations (1946-49) which have not yet been reported in a final publication, give difficulties. At the same time the questions about western or eastern influence or both are tempting to research, as excavations and publications from western and eastern extra-Mesopotamian cultural areas have highly increased our knowledge of these. Still it is possible to concentrate the general lines in a relatively short survey supported by diagrams, partly because different pottery wares dominate the picture, partly because the implement culture is otherwise relatively homogeneous from site to site. Of course problems make their appearance as regards pottery as well as the other implements. Thus in respect to the former we may mention the different interpretations of the Samarra painted pottery, and as to the latter, the fact that the Matarrah excavations (1948; publ. 1952), which showed a southern variant of the Hassuna assemblage, demonstrated the absence of chipped hoes, which conversely are relatively common at Hassuna.

Hassuna is situated west of the Tigris nearly halfway between Mosul and Assur, though nearest to the former town. Hassunan neolithic assemblages have since 1945 been found elsewhere in Assyria:

more southerly and easterly at Matarrah, about 25 miles south of Kirkuk, and farther north at Nineveh (1-2a), Arpachiyah (under Level TT 10), Gawra XXVI (?), Baradost II a-b, Hazer Merd (Eastern Cave), besides the fact that a rather decadent flint industry parallel with that of Hassuna has been found at Tell Ibrâhim Bayis (the Makhmur plain). At the same time surface findings of Hassunan pottery have been made in many places in Assyria after the investigators after the excavations in 1943-44 had become aware of it. Thus everything seems to indicate that the Hassuna culture had a certain extent on Mesopotamian soil; it is essential that the terminus of the Hassuna people towards the south seems to be 25 miles south of Kirkuk. For the position of Matarrah there is in good agreement with the fact that this settlement area is situated on the outskirts of the North Assyrian area the isohyet of which indicates the limit of the southwestern extent of winter rains sufficient to yield a grain crop without irrigation. 8 miles south of Matarrah these conditions of grain culture at any rate cease nowadays, and the small figures with which we count here, some time between 5000 and 4000 B.C. (cf. above, the radioactive carbon date of Jarmo) denote no appreciable climatic difference in relation to our day. It should be added that this train of thought finds support in the fact that no ruin mounds at all are known from between Kirkuk and e. g. Baghdad, apart from the regions along such rivers as the Diyala and its irrigation canals from a much later period.

At the Hassuna excavations two soundings of 50 square metres were made, 7 m to virgin soil and $3\frac{1}{2}$ m. These two were extended to an investigation area of 2500 sq. m. and they were connected by a 2 m broad trench: 15 levels were the result. Immediately above virgin soil Level I a: 3 camp sites. The finds suggest hunters (flint-implements: hoes; sling-pellets; stones for pounding; stone and bone implements), but finds of chipped hoes also point towards agriculture; the hoe culture is a sort of garden culture (cf. the Africans today) but without manuring or fallowing; it entails nomadism. The pottery is a very coarse burnished straw-tempered ware with a dark core.

From Level I b-c on we are faced with an agricultural community with flint sickles, chipped hoes (\neq Sialk I and II), husking-trays; they stored their grain in big spherical bins of clay, coated outside with bitumen and sometimes lined with gypsum plaster, sunk beneath

the floors of the houses¹ (cf. Jarmo Level 5, above p. 399). The people had adobe shelters, i. e. they were built of unburnt sun-dried brick (*libn*), which from Level III on originated in houses with clay ovens. Flint and obsidian are used as implements, no metals, but antimony and malachite for eye ornaments, just as beads and amulets. Shells from the Persian Gulf in the Hassuna finds as well as in all the following settlement assemblages testify to trade connexions with the south, just as the obsidian with the north and northwest. Many burials of infants in pottery jars, of adults from Levels III–IV on. The animal bones are of toad, rat, ox, donkey, sheep, goat, gazelle (?), wild boar, hare. In Level III we have a large house of *pisé* with rooms grouped around a courtyard, while Level IV gives a detailed picture of the prehistoric village and the character of its houses. As to pottery we have in Levels I b–II “archaic” Hassuna: hand-made, burnished plain or painted with a thick glossy paint or matt paint on a burnished surface; Levels III–VI “standard” Hassuna (painted, incised, painted-and-incised): hand-made, the clay is pinkish or buff and the slip cream, the paint is red-brown (rarely red), brown (chocolate), dark brown, black.

From Levels III–VIII with a maximum in Level V and with very little representation in Levels X and XI we find a ceramic ware different from “standard” Hassuna: Samarra pottery. “Standard” Hassuna has learnt from this, certain types are Samarra copies, but the Hassuna shapes and designs were already in the process of development in Levels I b–I c before the arrival in Level III of Samarran ware, which is always slipped. It is essential to ascertain that “standard” Hassuna is not demonstrably related to any known contemporary ceramic culture and therefore is vernacular.; but also that “standard” Hassuna is a local further development of “archaic” Hassuna, and the latter has a striking parallel in the incised wares of Mersin and ‘Amuq A. Mersin (Yümük Tepe or Soghuk Su Hüyük) near Tarsus (Cicilia) shows directly under the fortified village at Level XVI (13½ m) a layer 4 m. deep with settlements characterised by crude-brick walls and a rather primitive pottery in many ways most surprisingly similar to Hassuna archaic painted ware;² here again we have western parallels (cf. p. 401 above). But it is certain, whatever we are to do about the relation to the west, on which see at the end of the present

¹ Cf. Seton Lloyd and Fuad Safar, *Tell Hassuna*, p. 262 (*JNES* IV (1945), pp. 255–89).

² J. Garstang, *AAA* XXVI (1939), pp. 38–72.

chapter, that "standard" Hassuna without outside influence is a further development of "archaic" Hassuna.

Therefore, I think that it is of less interest to cover the distributional area of the Samarra ware, which besides the above-mentioned (see p. 403) Hassuna assemblages (in Matarrah the Samarra pottery is made of the same clay as that of which the coarse unpainted ware is made), is Baghouz, Samarra (1911; publ. 1930), Arpachiyah (?), Tell Brak, and Chagar Bazar 15, the two last sites as the first are extra-Mesopotamian. The material from Kifri¹ has not yet been published and the same applies to the Eridu material, the lowest levels of which is said to show a Samarra-like ware; the Samarra ware is not known at Gawra. My view of the Samarra pottery, which is based on personal study supplemented by R. J. Braidwood² and Charles Leslie's³ considerations is that the decorative elements may very well have been borrowed from perishable materials such as carpets, textiles, basketry, skin, and leather work,⁴ but that these perishable materials need not therefore be of foreign, Iranian origin (Seton Lloyd, Donald McCown, Ann Louise Perkins). The shadow of the Susa I pottery lies heavy on Mesopotamian prehistory in spite of the fact that all its original conditions are no longer present, and if we must necessarily speak about eastern influence, this is at any rate much later. Importation of textiles from Iran perhaps cannot be rejected, but then the result is still: the free creation of Mesopotamian potters under the inspiration of Iranian textiles; but rather have their own perishable materials been the starting point. The Samarra ware, as supposed by Braidwood, must be considered a luxury ware in the Hassuna culture; indeed its distribution is mainly parallel with that of the latter (minus Baradost, where the Ubaid ware replaces "standard" Hassuna). Finally it should be pointed out that the Iranian pot forms are quite dissimilar to those of the Samarra pottery so that a possible Iranian invasion of people can hardly be assumed, even though Samarra and Bakun B II might seem to have a common ancestor. I am disinclined to believe in individual settled Iranian potters in the area of the Hassuna culture in that period

¹ S. Lloyd and Fuad Safar, *JNES* IV (1945), p. 266²¹.

² R. J. and Linda Braidwood, Edna Tulane, and Ann L. Perkins, *New Chalcolithic Material of Samarran Type* (*JNES* III (1944), pp. 48-72).

³ *JNES* XI (1952), pp. 57-66.

⁴ M. E. L. Mallowan, *Iraq* IX (1947), pp. 245-48.

of prehistory. It applies to later periods: not the pottery, but the potter changes residence.

In Hassuna Level VI the painted pottery changes character, as the Halaf pottery from then on appeared and was completely dominant in Levels VII–VIII in order to die out in Level XII, from Level XI replaced by the also painted North Iraq Ubaid ware. But we must stop here for a moment and make a survey of the Hassuna culture, and shall later look at the two new types of painted pottery. In what precedes we have discussed the Hassuna culture on the background of the fact that we have 17 building levels, Level I being distributed to three sites, which denotes a long space of time, besides the fact that in a number of places in North Mesopotamia Hassuna assemblages, i. e. villages with the same culture, have existed. This suggests a certain uniformity as regards the cultural contents: hunters who have become settled agriculturists; but if only within hand-made kitchenware, the Hassuna man has created a permanent criterion. In what precedes we have seen the Jarmo man making the same invention as people in the Far West (see above, p. 399), pottery of haked clay, whether independently of the west people or not can never be decided. To the Hassuna man the invention of pottery was an accomplished fact: as early as Level I a the kitchenware was made of burnt clay; but from an originally extremely modest stage of pottery the Hassuna people developed a great skill and produced what we call "archaic", then "standard", and finally the Samarra pottery. Finally it is of the greatest importance for us that through the conscientious excavations by Seton Lloyd and Fuad Safar a sequence of pottery for the North Mesopotamian area has been secured: (1) coarse straw-tempered ware, (2) "archaic": burnished plain or painted, (3) "standard": incised, painted, or painted and incised, (4) Samarra, (5) Halaf, (6) (Northern) Ubaid. Especially (4) to (6) form a sequence of the greatest importance. In other North Mesopotamian sites the sequence may be somewhat different, e. g. Baradost: (1) coarse ware, (2) Hassuna plain "archaic", (3) "standard" Hassuna, (4) Ubaid, (5) Late Ubaid, etc.; Arpachiyah: (1) Hassuna? (2) Halaf, (3) Transitional Period, (4) Ubaid; Matarrah: (1) Hassuna, (2) Samarra, (3) Ubaid; Gawra: (1) Neolithic (parallel with Hassuna??), (2) Halaf, (3) Ubaid. But the sequence: Samarra – Halaf – Ubaid is established. It is of great interest already here to notice that Gawra had no Hassuna stage, as will be discussed

below. To sum up, it may be said about the Hassuna culture that it is indigenous Mesopotamian, but that affinities of the neolithic coarse pottery ware, not only the fabric but various types of lugs, are paralleled elsewhere (Ugarit V, Jericho IX 2, Mersin Neolithic) in the west.

§ 8. When we leave the Hassuna culture and pass on to later times, the period characterised by the two types of painted pottery, Halaf and Ubaid, sets a number of problems of the greatest difficulty which I think that, at least provisionally, we are unable to solve unobjectionably. As stated above, it has been established that in North Mesopotamia Halaf is earlier than Ubaid, but the Eridu excavations (1946-49) in a city area situated in the extreme South Mesopotamia have to some degree brought a new element of uncertainty into our evaluation of the material; for even though no Halaf pottery has been found at Eridu, the Eridu pottery seems to be older than that of southern Ubaid known to us since the years after 1918. Therefore we must first try in what follows to learn what form of culture is represented by the producers of the Halaf and Eridu pottery. The difficulties are great.

The Halaf ware was excavated in 1929 at Tell Halaf (the Habur area) outside the Mesopotamian area. The final publication was issued in 1943, at a time when this type of pottery had been (and later was) found in a number of other places: Mersin, Hama L, Ugarit, Carchemish, the Balih area (Aswad Mefesh), the Habur area (Tell Brak, Chagar Bazar). As stated above, the Halaf ware in Mesopotamia proper was found at Hassuna, Nineveh 2 b, Matarrah(?), Gawra XXV-XIV, and Arpachiyah. It is important to ascertain that this large distributional area, from the Mediterranean to Mosul, covers the occurrence of the Halaf ware; from Iran no Halaf potsherd has been recorded. In Mesopotamia the representation is of an extremely weighty character, even though the distribution is mainly restricted to the Mosul region, the finest and richest Halaf ware having been excavated at Arpachiyah, where three phases were ascertained: Early, Middle, and Late. It should be emphasised that the distribution in Mesopotamia is the same as that of the Hassuna culture, which would seem to indicate that conditions of living and the character of the culture were very similar to those of the Hassuna people; no finds from south of Kirkuk; cf. above, p. 403.

Unfortunately we must face the fact that we have only one Halaf

assemblage at the disposal of research: Arpachiyah, whereas in all the other above-mentioned sites we only see the Halaf pottery enter into some pottery sequence in a greater culture complex. The Halaf pottery was hand-made and at its culmination the paint was applied to a hard and beautifully finished smooth surface. The decorative elements are generally geometrical; animal motifs also occur, especially the bucrane (oxhead), and occur not only on the outside but also on the inside of the vessels; the clay used is well washed and refined; the swastika motif (known from Susa I) is missing as a decorative element. The Halaf pottery of Arpachiyah besides the Susa I pottery is the most colourful and beautiful pottery known to us from the Near and Middle East. The Arpachiyah assemblage furthermore included painted figurines, the first known (stamp) seals: "seal-pendants"; stone vessels; tools and weapons of stone, bone, clay; such animal remains as bones of pig, sheep or goat, small ox, medium-to-large ox, equus; metals: lead (Arpachiyah 6), two copper pins (Arpachiyah), copper bead (Chagar Bazar 12); copper implements (Tell Halaf); grains: emmer wheat, barley. Finally the tholoi: a peculiar round stone-founded house type, with a rectangular antechamber off one side; also rectilinear-roomed houses seem to have been found to occur. It is uncertain whether the tholoi were built with a true vault.

The highly developed pottery, even though still hand-made, the knowledge of metals, the use of stamp seals, and the strange building (tholos), of the use of which we have no knowledge, shows a peculiar further development in relation to the Hassuna culture. The question is, however, whether this is a result of quiet growth in continuation of the above characterised contents of the Hassuna culture or not. Above all we should not be confused by the Halaf pottery, the peak of the Mesopotamian art of pottery. We have in the Hassuna culture seen a slow continuous development: neolithic coarse > "archaic" > "standard" > Samarra, and should remember M. E. L. Mallowan's correct statement that the types of pottery of Samarra, Halaf, and Ubaid "have to some extent a common background of design,"¹ a fact which has been further elaborated by Ch. Leslie,² who postulates a "stylistic continuity between the Hassuna and Samarran styles and the Halaf styles."³ The knowledge and use of metals does not mean a

¹ *Iraq* VIII (1946), p. 116².

² *JNES* XI (1952), pp. 57-66.

³ *Ibid.* p. 66.

rupture of the continuity with the Hassuna culture, which the findings so far have not rejected: already the Jarmo people had trade relations with the neighbouring peoples, as appeared from the use of obsidian (see above, p. 400). The development has only taken us from the neolithic to the chalcolithic cultural stage. On the other hand the tholoi give food for thought.

Before Mallowan's excavations in 1933 at Arpachiyah tholoi were known to us from late cultures such as the Mycenaean and Late Cyprus I A (Enkomi). Besides from Arpachiyah tholoi are in Mesopotamia known from Gawra XX and XVII, and from outside Mesopotamia: Chagar Bazar 9 (?); Hama; Carehemish (Woolley's "kilns"); Ugarit; Mersin; and Jericho VII. At Gawra XX mud bricks (*libn*) were used for the construction. Nothing was known about the use of these tholoi until 1940. Woolley considered the Carehemish finds as kilns, Mallowan: buildings for unknown rituals; but that year the results from the excavations of the Khirokitia Neolithic I-III¹ in Cyprus were published. There 4-6 tholoi were found, the largest of them 10 m. in diameter, all built on stone foundations; the superstructure of *pisé* or of sun-dried bricks (*libn*) formed a kind of corbelled roof; also reed and brushwood bounded with packed mud were used as roof. The floors were made of beaten earth or mud, the surface was covered by a thin layer of fine dark coloured well-levigated mud. The most important feature, however, was that graves were dug in the floors of the tholoi and the burials contained bodies in a distorted position and the hands appeared as if they had been violently tied behind the back. There is hardly any doubt that the burials were coeval with the construction of the tholoi; but when this has been established, we must at the same time point out that neither Mesopotamian nor other extra-Mesopotamian tholoi have shown the presence of burials, perhaps because the floors have not been dug out; the excavation reports are silent on this point. Thus we have not advanced many steps, but cf. beehive dwellings today in North Syria.² One thing, however, is certain, that while the other cultural features mentioned from the Arpachiyah assemblage may be seen to be a further development of the Hassuna basis, the tholoi call for circumspection.

I doubt the possibility of getting any further so far. The Arpachiyah

¹ Cf. P. Dikaios, *New Light on Prehistoric Cyprus* (Iraq VII 1940).

² Cf. also M. E. L. Mallowan, *Mesopotamia and Syria* (Sumer V 1, 1949).

excavations of 1933 (publ. 1935) took place at a time when the Hassuna culture was unknown, so that Mallowan's approach was different during the excavations as well as when writing his report. Therefore the Arpachiyah culture is to some degree in the air, the bottom layers only having been sketchily mentioned; it seems that a Hassuna layer may be established before TT 10, but it is not found in the very earliest layers. We are left empty-handed here. And we do not profit by looking at the Gawra finds, where the Hassuna culture is not represented. Tholoi occur at Gawra, Levels XX and XVII, while metals have not been found until Gawra XIII (Ubaid period), but perhaps it is possible in Gawra XVII (Halaf period) to speak about the "arrival of metals" at Gawra, which, again, perhaps to some degree may cover Arpachiyah 6. Apart from a neolithic stage (Gawra XXVI), which according to the description at any rate is not parallel to that of Hassuna, the base of Gawra (XXV-XIV) consists of a Halaf assemblage; Gawra XIX-VIII are represented by the Ubaid industry, which from XIX to XIV appears together with Halaf.

The information given above is, I think, in broad outline what we know. What conclusions can be drawn from the material of the excavations? There is one established fact: the connexion with or relation to the western settlements established previously in the Hazer Merd-Zarzi, the Jarmo, and the Hassuna periods (see above, pp. 391, 392, 393 f., 401, 404 f.), now also in the Halaf period. But at the same time it should be pointed out that West Syria and South Anatolia have never yielded any good Halaf assemblage; only the eastern Halaf industry at Arpachiyah is of any real importance. Two conclusions can be drawn: (1) The western Halaf pottery advanced towards the east and from a modest beginning it culminated on Mesopotamian soil in Arpachiyah 6; the pottery was accompanied by a knowledge of metal, the use of stamp seals and of tholoi. (2) The Halaf pottery was a local further development in the settlements of Arpachiyah and perhaps Gawra of the Hassuna pottery, first spread from Arpachiyah to Mesopotamian settlements as far south as the Kirkuk area, and then exercised influence in the west right to the Mediterranean. This last proposition also involves—in contrast to the slow evolution—that an artistic achievement often culminates soon after its appearance. Tholoi then according to proposition 2 should be a North Mesopotamian architectural form.

No conscientious research-worker will be able to choose between these two possibilities, as he has no fixed place to which to attach his arguments. Ann Louise Perkins¹, if anything, adopts possibility 2, as she is of opinion that the Mosul region was what she terms the home of "the Halaf culture", but her main argument that influx from the west is excluded, that we know cultural influences from east to west, but not inversely, is indeed all in the air, since, as mentioned above, last on p. 410, even from the Upper Palaeolithic to the Halaf period, North Mesopotamia and the western settlements from Habur to Cyprus bear some relation to one another. R. J. Braidwood² has adopted another standpoint: there are two cultural entities which may be characterised through painted potteries, one being that which includes Hassunan, Samarran, and Ubaidian pottery, the other being "that in which the Halafian painted pottery style appeared". Braidwood does not enter into the question whether the Halaf pottery is indigenous Mesopotamian or not.

Only if Braidwood by "entities" understands two different phases of North Mesopotamian culture of which the latest (Halaf) differs from the earlier (Hassuna) through the use of metals, stamp seals, tholoi, and another type of pottery, the difference perhaps being conditioned by stronger western connexions than in the Hassuna period, I can accept his view; for if I am to engage on weighing the evidence, I must consider the Halaf stage only as chronologically later than the Hassuna stage. The continuity between these remains, only the influence of the west is stronger in the later period. Thus I consider the form of Halaf pottery known in North Mesopotamia as indigenous in the sense that it is a result partly of the Hassuna pottery, partly of western influences. But in my view Halaf is not an independent "culture" borne by another population than the Hassuna people,—nor a population invading the country either from the west or from the Mosul region, spread through the west to the Mediterranean. All that may be established is this: the continuity in the Halaf period with the Hassuna culture is retained, but the Halaf period shows a closer connexion with the west, perhaps was inspired from there in some way, more than the preceding Mesopotamian periods.

We may finally in this section in which the culmination of the

¹ *The Comparative Archeology of Early Mesopotamia* (1949; SAOC No. 25).

² *Journal of World History* I (1953), p. 301^{ab}.

Hassuna culture in the Halaf period has been mentioned, call attention to the fact that Hassuna I a, the beginning of the culture, denotes a step more advanced than Jericho IX and the Mersin Neolithic. If it is added that we now also know Jericho X–XVII and earlier stages (cf. above, p. 399²) and that the earliest known layers at Jericho may be connected with the Natufian Mesolithic, which is earlier than Jarmo, it seems that the priority of the west in neolithic prehistory is secured. Thus possibilities are present of the assumption that the cultural development in Mesopotamia, at any rate from the Upper Palaeolithic of Hazer Merd-Shanidar D on, may not be independent of impulses proceeding from the west.

§ 9. The uppermost layers at the Hassuna excavations contained the North Iraqi Ubaid pottery, the same thing repeats itself at Baradost, Arpachiyah, Gawra, and Matarrah (see above, p. 406). This type of pottery in North Mesopotamian settlement findings succeeds the Halaf ware. Does this painted pottery, which we have known since 1918 (p. 402) and which in the twenties and the thirties of the present century was considered the earliest cultural stage of the whole of Mesopotamia, constitute an independent culture or perhaps a culture coming from outside Mesopotamia? In order to answer this question we must have information about three things: (1) the relation between the southern, first known Ubaid Pottery and the northern Ubaid ware later found at Hassuna, Gawra, Arpachiyah, Nuzu, and Grai Resh; (2) an approximate chronological estimation of the layers in which respectively the southern and the northern Ubaid pottery were found; (3) an interpretation of the hitherto little voluminous publications concerning the Eridu excavations 1946–49. The best starting point for a discussion of the problems is presumably point 3.

The work during the excavations at Eridu was complicated partly by the lack of water of the expedition, partly by the large area of the site, but two soundings were made: the "Temple Sounding" and the "Hut Sounding", through which much was learnt while at the same time great problems arose. To begin with a prehistoric temple on a raised platform was found by excavations under the southern corner of the Ur III ziggurat: Temple I (late Uruk Period), a limestone one plastered with gypsum was the last of five temples rebuilt in situ. By continuing the excavation a number of temples were found,

Temples II–V from the Uruk period, all the rest from Ubaid and perhaps earlier periods: Temples VI–VII besides a cemetery from the late Ubaid period, Temple VIII \neq Temples VI–VII; after that an architectural difference was ascertained, as Temples IX–XI have thinner *libn* walls than the preceding ones, the walls of Temples XII–XIII do not exist any more. Temples XIV–XVI are different from the preceding ones as regards the *libn* used, which is now square and extremely long; of Temple XVII only three wall remains and half of a fourth are known.

Perhaps the excavation of a number of temples from the Ubaid period was the most important and most surprising result of the excavation expedition. Because of the experiences due to Woolley's Flood Pit at Ur (see p. 402) the people of the Ubaid period had until then been considered very primitive hunters and fishermen living in reed huts scantily tightened with clay. The latest Ubaid temple (VI) measured $23\frac{1}{2} \times 12\frac{1}{2}$ m. and stood on a platform of $26\frac{1}{2} \times 16$ m. Temples VIII–VI show that each had the form of a long cella with an altar at one end and a podium or offering table near the other and lateral chambers grouped symmetrically on either side of the nave. Or in other words: the standard plan of the Sumerian temple, which before the Eridu excavations was best known from the classical example, the first temple of Sin at Khafājah, from a much later period, has been ascertained from some time in the Ubaid period, an ascertainment of far-reaching consequences.—As to the "Hut Sounding", which was made 80 m. from the ziggurat of Ur III by means of a shaft of 7 square m. and 12.15 m. deep, down to virgin soil, 19 levels were established, mainly remnants and rests of huts, though in Levels I–VI parts of six houses (sun-dried bricks: *libn*), in Levels XV, XVII, and XIX husking-trays like those at Hassuna (see p. 403) were found, evidence that the settlers from the first beginning at any rate at Eridu were farmers.

The difficulties begin when we look at the pottery found in the temples and the Hut levels. In Temples VI and VII we find the southern Ubaid ware, in VIII the northern Ubaid pottery, from IX–XIV Hajji Muhammad pottery, and from XV the so-called "Eridu" ware; the "Hut Sounding" in Level V shows Ubaid pottery, in Levels VII ff. "Eridu" pottery. I shall not make any attempt at getting to the bottom of the differences between Temple and Hut Sounding pottery, only in what follows to begin with offer a description of the types of pottery mentioned.

I. Southern Ubaid ware: (1) greenish, overbaked, almost vitrified pottery, ornamented with black paintings; no slip, no polishing, no polychromy, poor repertory of motifs in paint.

(2) much softer, grit-tempered buff clay with a cream slip or slip of the same colour, on which designs are painted in black fading easily to brown.

The difference between (1) and (2) is presumably due to the firing, only.

(3) a bright pink, moderately baked, with a slip of the same colour or cream (perhaps a vernacular 'Uḫair form).

II. Northern Ubaid ware (retarded and provincial): (1) the clay is usually light buff, sometimes greenish, and some of the more carefully finished vases are coated on the outside with a chalky white slip. The paint is normally a matt black.

(2) pink clay with a highly polished red slip.

(3) buff ware with a smeared red wash.

III. "Eridu" ware: "It is composed of a well-tempered buff or sometimes reddish clay covered with a light slip. The paint which is usually chocolate-coloured, but varies through dark brown to black, is really matt, but something in its chemical composition gives it a distinctly glossy quality in the process of baking, when laid on particularly thick. These (misprint for: There) are also occasional examples of much thinner red paint."¹ The brown chocolate colour and the thick glossy paint remind of the Has-suna pottery; cf. p. 404.

The Hajji Muhammad pottery was found in the winter of 1936-37 by E. Heinrich from the Warka excavation expedition² during the soundings of the terrain towards the east in the direction of the Larsa region, as surface finds at Raidau Sharqi and Hajji Muhammad. This pottery is provided with slip, carefully polished, and with monochrome paint (dark brown, green, violet, pink) on a light ground, which is buff, green, or yellowish red with geometrical patterns. The paint covers both the outsides and the insides of the pottery, particularly the latter. E. Heinrich, not least because of the painting of the insides,

¹ Fuad Safar, *Sumer* IV 2 (1948), pp. 124-25.

² Cf. E. Heinrich, *UVB* IX (1938), pp. 37 ff., and Ch. Ziegler, *Die Keramik von der Qal'a des Haggi Mohammed* (1953; *Ausgrabungen ... in Uruk-Warka* V).

considered this pottery a Halaf ware; cf. above, p. 408; but this ware is not known south of Kirkuk, and the finding of the "Eridu" ware (1946-49) has made it possible to place the Hajji Muhammad pottery.

Types of Ubaid pottery are: shallow dishes with flattened rims and round or ring-bases; bowls with square or round rims; finely made beakers with ring-bases and slightly inverted sides; tall cups sometimes with ring-bases; jars with everted necks, with or without spouts and basket-handles; jars with pierced lugs on the shoulders; pouring bowls with uptilted channel spouts; long-necked bottles with a globular body.—New types from Eridu are: Levels VIII-XIII: the "tortoise-shaped vessels" (Perkins: lenticular hole-mouthed pottery vessels with long bell-mouthed spouts), which were known from Gawra XIX-XVII, with North Ubaid painted ornament; Levels VIII-XI: globular jars with a narrow bottle-neck (also known from Gawra); Levels VIII-XIV, XVI, XVIII: large, globular or slightly carinated hole-mouthed jar with a rounded ledge inside the rim, pierced with four holes (parallels according to paint to Hajji Muhammad); Levels VIII-IX: very small bowls.

We must mention another three essential things before we try to summarise our experiences: tholos-like structures were found, in Levels XV, XVI, XVII, and XVIII of the "Temple Sounding", those layers in which the pottery found was only "Eridu" ware. Fuad Safar terms them "kilns" on his plan¹ but in the text itself he touches on the relation to Gawra XVII.² And next, that in Sialk II³ we have an obvious parallel to the use of the extremely long square *libn* used as bricks at the construction of Temples XIV-XVI. Finally, that, as regards the motifs of the painting, Hajji Muhammad has many parallels in Bakun A (Persepolis).

Before we attempt an interpretation of the Eridu material, we shall examine whether it is possible to answer questions 1 and 2 on p. 412. If we take the Jarmo radioactive carbon date 5100 as our starting point, the beginning of the Hassuna culture must be dated after this year. On the duration of this culture, on the other hand, we cannot make any statement, but it is hardly a question of a short lapse of time, as the Hassuna culture covers a number of stages of pottery: coarse

¹ *Sumer* IV 2 (1948), Pl. VI.

² *Ibid.* p. 121.

³ R. Ghirshman, *Fouilles de Sialk* ... I (1938) Pl. XI 4.

burnished—"archaic"—"standard"—Samarra—Halaf—Ubaid. Braidwood¹ imagines about 500 years as the possible duration of the culture, dating Hassuna at about 4400, Halaf at about 4100, and Ubaid at about 3900. These figures are merely tentative, not based upon comparative considerations of the thickness in metres of débris, as such an argument, as mentioned in Chapter VI § 7 p. 324, is often more misleading than guiding. Undenially Braidwood's figures seem to me too low, as there is something to be said in favour of the view (see p. 401) that the deepest stratum of Hassuna (I a) and the uppermost stratum of Jarmo (1) cover one another in time, which according to Braidwood's dating would require that the Jarmo culture covered about 700 years.

But what we try to fathom in this connexion is the correlation between North and South Ubaid and the approximate dating of these two types of pottery, and then note as one of our few established facts that the "tortoise" pottery type of Eridu (Levels VIII—XIII) and the globular jars with a narrow hottle-neck (Levels VIII—XI) are known from Gawra XIX—XVI; to which we may add: the Sumerian Ubaid temple architecture established at Eridu is found identically in Gawra XIX, although on a smaller scale (8.15 m. in length), while the temple complex of Gawra XIII surpasses every South Mesopotamian Ubaid temple in size. A synopsis in broad outline of the strata of Gawra follows below for argumentative guidance:

Gawra XXVI Neolithic (parallel to Hassuna?? Two base cuts below		Level XX yielded: undecorated ware and brittle orange	
		ware with wavy red-line ornamentation (cf. Jarmo	
		Level 2, above, p. 399).—We cannot tell whether the	
		base of Gawra was Hassunan or Halafian)	
[XXV—]XX	Halaf		
XIX—XIV	} Halaf		
XIX—XIV			
XIII—VIII	} Ubaid		
		(the beakers of XIII ≠ Susa I, not with Southern	
		Ubaid, and the designs remind us of Halafian	
		motifs)	
XI—VII B	} Uruk		
VIII—VII			
		Jemdet Nasr [VIII B-C: Uruk; VIII A—VII Jemdet	
		Nasr] (≠ Billah 6-7; Assur before II)	

¹ *The Near East* ... (1952), pp. 31-37.

VI	Early Dynastic ¹ (Royal Tombs, Ur; Billah 5; Assur G)
V	Sargon (Billah 4 c; Assur E)
IV	Ur III (Billah 4 b, a; Assur E)
III-I	Hurritic period (17th-14th century).

In this connexion it should be mentioned that the Gawra main excavation did not proceed below Level XX and did not reach virgin soil. The indications above, as regards Levels XXVI-XXI are a perhaps incomplete result of two base cuts. Braidwood² supposes that the base of Gawra was a Halafian assemblage; A. J. Tobler³ already from Level XIX emphasises the occurrence of transitional Halafian-Ubaidian levels. This means that the two above-mentioned Ubaid pottery types occur in the earliest Ubaid levels of Gawra.

A list of the pottery wares of Eridu ("Temple Sounding") runs as follows:

Eridu XVII-XV	"Eridu" ware
XIV-IX	Hajji Muhammad
VIII	Northern Ubaid, Southern Ubaid
VII-VI	Southern Ubaid.

The problem then is this: is Eridu VIII contemporary with, earlier or later than Gawra XIX, which denotes the lowest known Ubaid industry in this settlement? The difficulties here are extreme. The Iranian correlations (Sialk II, Bakun A) cannot help us to advance any farther as regards the relative chronology of North and South Mesopotamia, and unfortunately we are not sure as regards the tholos-like buildings in Eridu XVIII-XV. But it is of importance to observe, partly that similarities may be established between the painting of "Eridu" ware and "archaic" Hassuna (see p. 414), partly that the pre-Ubaid pottery found during the "Hut Sounding" of the 3rd season is not mentioned as "Eridu" ware, but as "burnt coarse clay", which reminds of Hassuna I a.

From this material I draw the following conclusions, which for very good reasons should only be considered a preliminary working hypothesis: Mesopotamia has been inhabited from the Middle Palaeolithic;

¹ By Claude F. A. Schaeffer, *Stratigraphie Comparée* ... (1948), p. 97, dated at the time after Sargon (about 2300), which I cannot accept.

² *Journal of World History* I (1953), p. 306.

³ *Excavations at Tepe Gawra* II (1950), pp. 41-42.

by way of the settlements of the Upper Palaeolithic further to the Karīm Shahr and Jarmo settlements the Hassuna culture in the north, which covers up to five cultural periods, was crystallised. In the period from the Upper Palaeolithic to somewhere in the practically unknown Mesopotamian Mesolithic (Zarzi top layer, Shanidar B) or in the Jarmo period, the southern alluvial country came into existence so that geographical positions such as e. g. the later Eridu were inhabitable.¹ Neolithic flint and obsidian implements in which bitumen was used as a fastening material found at Khafājah, Kish, and Telloh as well as the Samarran and Halafian pottery of Hassuna found in such settlements as Samarra and Hajji Muhammad are evidence that the northern culture has diffused towards the southern alluvial country. This was then, however, as supposed by some research-workers, settled by people from the West Iranian area (according to McCown, Perkins, and Parrot; see below p. 445) as far as the Zagros Mountains, which climatically in part and geographically completely forms a unit with the South Mesopotamian area, or it was highly influenced by their pottery industry; the latter view is mine. The sites in this West Iranian area are Tepe Giyan, Susa, Tepe Musyan, and towards the southeast Bander Bushire, and Tall-i-Bakun (Persepolis).

It is difficult to fathom this Iranian pottery industry because of the broken archaeological sequence at Bakun, the absence of stratigraphic layers at Susa and Musyan and the amorphous stratigraphy of Giyan² just as it is difficult so far to provide evidence of a contact between the western and southwestern Iranian "Buff-ware culture" and the Northeast Iranian "Red-ware culture" (Sialk, Chasimah Ali, Hissar). As regards the Iranian Palaeolithic and Mesolithic, this study is still at its very first stage³ and a connexion with the two above-mentioned Neolithic cultures has not yet been established, but the five runs made for dating by C 14 (radioactive carbon) take us, as regards the Mesolithic, higher in years than 10,000 B.C.

My view that the bearers of the Hassuna culture took possession of Eridu before the influence of the West Iranian "Buff-ware" people asserted itself, is based on the "burnt coarse clay" pottery of the "Hut

¹ Cf. G. M. Lees and N. L. Falcon, *The Geographical Journal* CXVIII (1952), pp. 24-39.

² Cf. Donald E. McCown, *The Comparative Stratigraphy of Early Iran* (1942; SAOC No. 23), which is our basis in what follows.

³ See Carleton S. Coon, *Cave Explorations in Iran 1949* (1951).

"Sounding" and on the Hassuna-like painting on a pottery which is a typical "Buff-ware" pottery. Most important is the coarse pottery, which is known from within the area of the Hassuna culture (Hassuna, Nineveh 1, Baradost) and has a western parallel in the Mersin Neolithic, while the Iranian coarse wares in the "Buff-ware" industries are either chamois-slipped (Giyan V) or very crude half-baked brown pottery (Bakun B 1). In Sialk I in Northeast Iran we have a slipped light-toned coarse ware; but the "Eridu" ware itself, apart from the Hassuna-like painting, is a typical "Buff-ware", so that according to what precedes, Eridu very soon after the spreading of the Hassuna culture to South Mesopotamia was influenced from the east.

Repeated great and small waves of population from North Mesopotamia asserted themselves in the southern Eridu area, where the "Buff-ware" influence can be traced, and this explains the existence of the Hajji Muhammad pottery as a mixture of Halafian Hassuna elements and the southern "Eridu" ware, as well as the above-mentioned (p. 416) correlation with Gawra as regards pottery types. But at the same time the constantly renewed and enlarged constructions of temples at Eridu show that a cultural form developed there which may be termed the Ubaid culture and which at a certain time was capable of diffusing towards the north, where it everywhere advanced and supplanted the last peak of the Hassuna culture in the Halaf period, indeed even advanced as far as the Iranian Azarbaijan,¹ where at Geoy Tepe, 4 miles southeast of Urnia, the N-Period (well polished red ware \neq but not in forms with Anatolia; thin very hard fired but rough grey pottery) was superseded by the South Mesopotamian Ubaid ware of the M-Period, at the end of the period by North Mesopotamian Ubaid. The Ubaid industry also advanced towards the west; thus we find it at 'Amuq E as absolutely dominant, superseding all others, a fact which shows the striking power of the culture. The Halaf industry had not been able to do so, thus in 'Amuq C it is only parallel to other pottery wares.

As to the industry characterized by "Eridu" ware (Levels XV-XVII, "Hut Sounding": Levels VII-XIX), we have not in what precedes ventured to state with certainty whether it was a result of the extreme outpost of the Hassuna people towards the south + West Iranian influence or + West Iranian peoples mixed with Hassuna people. Our only clue is weak: the Eridu people used *libn* as building material from the

¹ T. Burton Brown, *Excavations in Azarbaijan, 1948* (1951).

very first beginning known to us through the excavations. This is unknown at Hassuna from Level III on, where *pisé* (packed mud) was used, and before this cultural stage we dare hardly, at any rate, attribute any urge to the Hassuna culture to expand towards the south. Iranian building forms from West Iran are unknown to us, but in the northeastern "Red-ware" industry we find at Sialk II hand-made bricks (*libn*). In the same place (and in Sialk I) the chipped hoes are found which are known to us from Hassuna and which from Ubaid time were found at Eridu in 1918 by R. C. Thompson and later at 'Uqair.¹ But it does not help us on. Sialk is situated too far away, and even if the people of Sialk I were mixed racially (hyperdolichocephalic, dolichocephalic, and brachycephalic), and this assemblage has points of resemblance with the much earlier(?) Jarmo assemblage, as Braidwood and I agreed one evening in February 1951 up at Jarmo, I am bound to admit that we are still, at any rate, unable to adduce the Northeast Iranian industries in our appraisal of the South Mesopotamian Ubaid material. Sialk I is also a chalcolithic industry, and like the 'Amuq culture knows the use of metals. And none of the great number of cultures of Sialk can be connected with Mesopotamia. But it is certain that the Eridu people used other building materials than that of the Hassuna culture. Nor have the great number of temple buildings at Eridu any parallel in the Hassuna assemblages in North Mesopotamia. Thus we cannot decide whether a contingent of West Iranian people has been mixed into an existing Hassuna element at Eridu. But a decided influence from the West Iranian "Buff-ware" industry is at any rate certain. About H. Frankfort's "Arab [i. e. Semitic] swamp element" in the South Mesopotamian marches² I prefer to be silent. The possibility is there, but we are absolutely empty-handed if we are to try to make the idea probable, which has started constructive reflexions in S. N. Kramer³ and André Parrot.⁴

The objects found give us further insight into the general conditions in early Ubaid times: it is true that the dwelling-place is still a hut built of reeds and clay, but a kind of sun-dried clay bricks seems later to

¹ Seton Lloyd and Fuad Safar, *Tell Uqair* ... Pl. XXIX lower left (*JNES* II 1943).

² Oral information; see D. E. McCown, *The Comparative Stratigraphy of Early Iran* (1942), p. 36^{ab} (SAOC No. 23).

³ *Heroes of Sumer* ... (*Proceedings of the American Philosophical Society* 90, 1946); *AJA* LII (1948); and *Bulletin Univ. Mus. of Pennsylvania* 1948.

⁴ *Archéologie mésopotamienne* II (1953), pp. 323-31.

have come into use, while rush mats plaited in various colours covered the inside as well as the outside of the dwelling. Burnt clay nails pressed into the basic substance of wet clay or mud perhaps served to fasten the plaited reed covering. In some places a platform of rushes in carefully crossed patterns, stamped down and covered with clay, served as a kind of foundation in marshy soil. Larger houses seem to have been furnished with clay doors in frames of wood, which could be opened, turning on a clay pivot in a stone depression. Numerous such hollowed-out stones have been found in Tell Al 'Ubad. Everything goes to show that the people were now living in fixed habitations.

The objects found increase our knowledge. Round discs of baked clay provided with two or three holes have probably been sinkers for fishing nets, while others made of bitumen served as weights to regulate spinning; that sewing, too, was known is seen from the bone needles with eyes. Small animal figures suggest that the people had domestic animals such as cattle and sheep in folds, clothes being made from the wool of the latter. That fish served as food appears from the accumulations of remains found e.g. at Uruk and Eridu. That food plants were also grown is revealed by finds of sickles and grindstones, while the numerous finds of flint arrow heads, small stone axes, and harpoons tell us that hunting and fishing were still practised. The marshy country intersected by small streams and lagoons was traversed by boats; judging from the clay models from Eridu Levels VI-VIII these had high prows and sterns. The stems of date palms, the wood of which was used for instance for door frames, were worked with small trapeze-shaped cooper's axes. Finally we should mention clay models (found at Ur and 'Ukair) of shaft-hole axes, which in later times were translated into metal ones.—Incomplete but clear, the picture of a peasant culture thus emerges, a culture which eked out by hunting and fishing the foodstuffs which farming and cattle breeding supplied.

But there is hardly any doubt that this cultural stage was soon left and that the southern Ubaid people soon reached a cultural level at which they mastered both the social and technical aspects of social life so that they could perform elementary irrigation; then the farming culture was on firm ground, the villages increased in size, and the temple building (Eridu, Gawra) was started. In spite of the lack of metals the Ubaid culture was capable of controlling both the south and the

north of Mesopotamia and of culturally superseding the Hassuna culture, whose very late-born child it was, when all is said and done. The southern and northern Ubaid pottery industries vary from place to place according to provenience, but the common basis is seen everywhere.

The distributional area of the Ubaid culture was as follows: A. The south (which we consider the cradle of this culture): Eridu (see above); Tell Al 'Ubaid (surface finds); Ur (three pits, especially the "Flood Pit" of Season 1929-30); Uruk (pit in the precinct of Eanna, building levels XVIII-XV); Hajji Muhammad and Raidau Sharqi (surface finds); Telloh (pit under Entemena's esplanade: 800 sq. m., water level reached at 22 m.); 'Ukair (7 levels going down to virgin soil).-B. The north: Gawra XIX-XII (VIII); Arpachiyah 5-1; Nuzu XII-XI (L 4 pit); the Hassuna assemblages (see p. 406); Nineveh 3 (at least in part); Grai Resh IX-VI. - Temples at Eridu have been mentioned above; at Gawra temples were found from XIX to VIII A, well preserved in XVIII; in XIII a large area is seen, an acropolis with three temples. About 600 stamp seals are known from Gawra, but few from the south; furthermore a little metal, which is unknown in southern Ubaid, but then the north is closer to the mountainous country east of the Taurus range, which supplied metals to the Aegean, Egypt, and Mesopotamia; already the Halafian Hassuna stage was chalcolithic.

§ 10. Apart from the initial stage in North as well as South Mesopotamian culture (Hassuna-Eridu), in which we find a coarse burnished pottery ware, and a little later, in the north, incised and unpainted plain ware (Nineveh 1, Hassuna), both of the two cultures mentioned produced different painted pottery wares varying with the times, which in Mesopotamia are dominant at the same time as a painted pottery focus of the Zagros are in the present Iran. The greater effect has the change of pottery ascertained to have supplanted the Ubaid pottery named Uruk ware after one of the principal sites. It has been manufactured with a new technique, the potter's wheel; a genuine spinning wheel (Uruk XIV, Eridu V) had been taken into use (though already known in Uruk XVIII, which belongs to the Ubaid culture) where previously only the use of a tournette (slow-wheel) was traced in Southern Ubaid (late), late Halaf, and in the Iranian "Buff-ware" culture. The firing seems to have taken place in kilns, the fire of which was

damped so that the smoke permeated and coloured the clay; perhaps damp firewood was originally used.

The Uruk ware is monochrome and three fabrics can be distinguished: (1) a grey ware covered with a fine slip, which takes a high polish and a rich black hue, a carboniferous ware completely alien to Mesopotamian ceramic tradition; (2) made of ferruginous clay, which assumes a red tint when burnt in oxidising air, is covered with a slip rich in iron oxides, so that the polished surface appears brick red or plum red; (3) by a special firing process in which the vessels are kept clear of smoke while at the same time the supply of air is controlled, a grey ware is produced. This grey ware, which like the two preceding ones is unornamented except by burnishing, is made of straw-tempered grey clay with a grey slip, roughly burnished on one or both sides with a pebble, sometimes in a pattern. The pottery types also denote a rupture with the past: cups, mugs, and jugs with handles or with bent spouts, bevelled rim bowls; the latter are somewhat later in occurrence (Uruk XII, Ur,¹ Eridu, Lagash, 'Ukair, Jemdet Nasr, Khafâjah, Nuzu, Nineveh; extra-Mesopotamian: Tell Judaidah ('Amuq); Hama; Egypt: Abydos, Saqqara, Naga-ed-der, Badari; Susa; and Tepe Musyan) and have later reached as far as Egypt (see above), perhaps not until Early Dynastic times, perhaps earlier in the Gerzean (Naqada II) period (about 3900-3200).² But while this rupture is established, it should be emphasised that there is in all sites mentioned below an appreciable overlap of Ubaid and Uruk ware, which, however, has never been observed on top of layers of ashes of towns destroyed by fire; the transition from one ceramic ware to the other seems to have taken place quietly and slowly.

The first occurrence of the Uruk ware was established at Uruk: Eanna XIV and Anu ziggurat G, furthermore at Ur: Ur-Ubaid III (grave) and parts of the "kiln stratum", besides in the "Early Uruk" of Eridu. But before we try to make a synopsis of the Mesopotamian distributional area of the new pottery, it is necessary to call attention to the fact that after Ubaid times North and South Mesopotamia do not seem to have had any actual cultural connexion; the south is culturally dominant and for that matter remains being so right down to late Assyrian times. The periods of the north and the south during the

¹ Woolley, *AJ* X (1930), p. 331 f.

² T. Burton-Brown, *Studies in Third Millennium History* (1946), pp. 36-38.

time after the Ubaid Period do not cover each other, either. Using Pinhas Delougaz's¹ nomenclature Proto-literate, we shall in synoptic form give an impression of the Mesopotamian period from the time when the Uruk were made its first appearance down to the beginning of Early Dynastic Period I; in a short commentary some details of the synopsis will afterwards be elucidated:

The South	The North
<p>A. Uruk proper: Uruk: Eanna XIV-IX; Anu ziggurat X, G-B (?) Ur: Ur-Ubaid III</p> <p>B. Proto-literate Period: (a) Uruk: Eanna VIII-VI^a Anu ziggurat B (?)—A Mosaic Temple I Ur: archaic stratum IV in the ziggurat area Eridu: Temples I-V 'Ukair VII: Painted Temple Telloh: Centre of East Mound E (Levels 11-8) and D (Levels 7-3)</p> <p>(b) Uruk: Eanna V-IVa, b Mosaic Temple II Ur: archaic stratum III in the ziggurat area 'Ukair VII: Painted Temple</p> <p>((c)-d) Uruk: Eanna IVc - III; II Ur: Jemdet Nasr Cemetery Fara I Khaffajah: Sin Temple I-III (c), IV-V (d) Teli Asmar: Abu Temple (earliest shrine: d)</p>	<p>A. Gawra Period: Gawra XI A-VIII B Nineveh 3 (part of)—4 Nuzu IX-VIII C-B Grai Resh V (part of)—II</p> <p>B. Ninevite Period: Gawra VIIIA - VII (VII also historical time) Nineveh 5 (continued in historical time) Nuzu VII Grai Resh I</p>

Notes: (1) B. c-d (the South) and B. (the North) were previously termed the Jemdet Nasr Period.

— (2) The Gawra and Ninevite Periods overlap in the southern Proto-literate Period c.

As a comprehensive name for the period from the end of Ubaid to Early Dynastic I it is most reasonable to use the name of the site where the two subsections of the period are most fully represented, and, as

¹ P. Delougaz and S. Lloyd, *Pre-Sargonic Temples in the Diyala Region* (1942), pp. 8, 125-35 (*OIP* LVIII). Delougaz's Proto-literate Period includes Uruk VII-III; differently A. L. Perkins: Uruk VIII-III, and S. N. Kramer: Uruk V-III.

^a Delougaz: VII-VI.

it will also in what follows appear that a characteristic culture arose there during this period, to use the designation: the Warka Culture.

But before this culture, especially known from Uruk, Eridu, Telloh, Ur, and 'Ukair, is outlined, it should in continuation of our incipient characterisation in this section of the ceramic rupture with the past which we established in the case of the Uruk ware, be emphasised that another change of pottery is seen in the last period of the Warka culture (Proto-literate Period c-d: the South; Ninevite Period: the North). The Painted Pottery returns as the dominant kitchenware for a short time in three not identical but related wares; in the South we have the polychrome Jemdet Nasr Pottery (rectilinear ornament in black and dark plum red on the buff ground and polished; the greenish clay is sometimes covered with a slip); in the North, the Billah ware (Nineveh 5, Gawra VII, Billah 7) and the Central Mesopotamian Diyala or Scarlet ware (Tell Agrab, Khafajah, Tell Asmar). As a new pottery type we should mention the so-called "stoppers", also that the painting is confined to the keeled jar in the Jemdet Nasr Pottery. After the last periods of the Warka culture the ceramic development of Mesopotamia subsides, a plain undecorated ware being dominant and most pottery types from the time before the Early Dynastic Period being retained. Only a decorated reserved-slip ware (Uruk IV b; Ur: Pit X) survives in the first part of the Early Dynastic Period¹ as well as the Scarlet ware. Only much later were other pottery types seen in Mesopotamia for a longer or shorter period: the Minyan ware² in Akkadian times (Sargon c. 2300); the Habur ware (about 1800-1550)³, and the Nuzu ware (about 1550⁴-1350),⁵ which will not be mentioned in detail here; they were only on a guest performance for a short time and have no appreciable influence.

Two of the above-mentioned three painted potteries, the Scarlet ware and the Billah ware, overlap with the Early Dynastic Period. In all the three types a distinct influence from or parallels to Iranian ceramics can be traced, thus the Scarlet ware agrees exactly in technique, composition, and style with the Susa D pottery, only that the pottery forms

¹ Cf. the survey in H. Frankfort, *OIC* 20 (1936), pp. 62-63.

² Cf. E. J. Forsdyke, *JHS* XXXIV (1914), pp. 126-56; V. G. Childe, *JHS* XXXV (1915), pp. 196-207; T. Burton Brown, *Excavations in Azarbaljan, 1948* (1951), p. 249.

³ Cf. Mallowan, *Iraq* IX (1947), p. 23.

⁴ Woolley: 1450-1350; see his *A Forgotten Kingdom* (1953), p. 132.

⁵ Mallowan, *Iraq* IX (1947), pp. 239-41.

are different. The decoration on the Jemdet Nasr also shows points of resemblance with that of Susa D as well as with western geometric style, while the Billah chalice ware, which Sir Leonard Woolley¹ has determined as lamps has been found at Carchemish, Alalah XIV, Troy in the west as well as Iran in the east (Nihawand, Anau). But as appears from what was just stated, also western parallels may be adduced. This fact may be the result of a strong eastern influence active from Iran to the Mediterranean, even though the causes of it are obscure so far. But especially the highly naturalistic representations on the Scarlet ware from the Diyala region, of gazelle hunting, symposia, war chariots, animals, women carrying mirrors, which remind of parallel seal impressions from the Early Dynastic Period attract attention. For even if the southern Jemdet Nasr decoration and Susa D are felt as patterns, the figurative representations seem to be the adoption in later times of new motifs, which were transferred from ornamental objects to the earthenware because a coloured decoration was known and used in advance. In other words, the Scarlet ware is an independent Mesopotamian pottery, but inspired by earlier traditions in the country as well as currents from abroad. Of course we dare not set up the "Eridu" ware as a definite analogy (cf. above, pp. 419 f.), but it should be stated that even though extra-Mesopotamian influence can be established in the last Painted Pottery ware of the last part of the Warka culture, there are no cogent proofs of the assumption that the Jemdet Nasr Pottery and related wares should be evidence of foreign invasion or a change of population.

If we consider the Warka culture in detail, it must be established at once that in the south there was a long period, A. (see p. 424: Eanna XIV-IX, Anu ziggurat G-B), where only the new Uruk ware, which then served as kitchenware, was characteristic and new in relation to the Ubaid culture, which, for that matter, was continued culturally without it being possible for us to ascertain any creation anew. In return B.: Eanna VIII-III shows an extremely creative wealth so that we may safely say that the Sumerian culture known to us from historic time with textual evidence arose in the second period of the Warka culture. Besides the cultural conquests which are to be mentioned below, we remind of the fact that a change of pottery also took place in Period B. c-d (see p. 425).

¹ *A Forgotten Kingdom* (1953), pp. 49 ff.

First, we should refer to the architecture within which we have three large building complexes to mention. The "Anu ziggurat" area, where, as in the other two building sites mentioned below, generation after generation built the temple of that period, probably in Layer D shows the earliest Uruk temple preserved, the "White Temple",¹ which was built on a Z-shaped platform (70×66 m., 13 m. high), the walls of which were strengthened by buttresses; such an architectural measure is known already from the Ubaid temples of Eridu. A stairway, $2 \frac{1}{2}$ m. wide, led up to the "White Temple" ($17 \frac{1}{2} \times 22$ m.). This system is the ziggurat still in its swaddling-clothes or first modest beginning; still it should be mentioned that the Warka culture is hardly creative in this connexion, since at the excavation of the Ubaid temple VII of Eridu it was found that "the entrance, through a vestibule to the sanctuary, was approached by a formally designed flight of steps between parapets (perhaps the first example of this ubiquitous feature in the history of architecture) and other outside doors were approached from a narrow terrace".² There is hardly any doubt that this is the beginning of the ziggurat as an architectural phenomenon observed by us for the very first time.

Most impressive, however, is the Eanna precinct of Warka, where only Levels VII-III have building remains, but then in extraordinary dimensions. The largest of all, Eanna V, the "Limestone Temple", was, like Eridu temple III, erected by the building material hitherto alien to Mesopotamia, limestone blocks, and measured 76×30 m. Still more impressive are the building activities in the following Eanna Period IV, which includes three phases of building, and in which IV b shows the largest architectural layout in the whole of the prehistory of Mesopotamia: four temples, of which temple D is the "Pillar Temple". Standing on a mud brick (*libn*) platform we see the entrance to the temple formed of a kind of portico consisting of two rows of four detached brick columns, each 2.6 m. in diameter, corresponding to four half-columns in the temple wall. Columns, walls, and the front of the platform were reinforced and decorated with baked clay cones driven into the building material; the visible ends of the cones were red-, white-, or black-coloured and form mosaic patterns in the form of diamonds

¹ There is disagreement as to the dating: H. Lenzen: Eanna III (Jemdet Nasr); A. L. Perkins: Eanna VI.

² Fuad Safar, *Sumer* III 2 (1947), p. 105.

and triangles. Eanna IV a, the "Red Temple", about which little is known to us, Eanna III: three phases, from which the "Labyrinth Temple" should be mentioned besides the Eanna ziggurat (Z; later: Egi-parimin); but it seems that the sacred area has been removed to some other place.—The third area is constituted by the "Mosaic Temple" I and II, which is paralleled in time with Eanna VI–V.

Outside Uruk we have in Eridu V–I, as well as in 'Uḫair (Painted Temple: in plan with Uruk's "White Temple", crenellation of outer walls, temple platform, and two staircases, the interior walls decorated with frescoes: red, orange, and black on a white ground: leopards, bulls, and human figures with a sort of *kaunakes*; the "Jemdet Nasr Chapel"), Khafājah, and Tell Asmar temple buildings from the Warka cultural period. It is interesting to note that there were windows in the Eridu temples.

From Period B. I (the South) on we find a change in building materials, as "Riemchen" (small prismatic mud bricks: *libn*) are used; the earliest building with these seems to be the Eanna ziggurat. Other "Riemchen" sites are Ur (archaic level or strata II–I), 'Uḫair, Tell Asmar. We note this fact, like the above-mentioned change of potteries, without any external causes apparently having given rise to it.

The use of metal for tools and weapons is characteristic of the Warka culture. The first copper worked up is known from Eanna XI; it is copper alloyed with lead; the real tin bronze is known from later times such as Early Dynastic Period III (see below). Silver was known and was imported as well as lead from the Taurus range, lapis lazuli from Badakshan (North Afghanistan); in the north metals are known from Gawra VIII A–VII (the Warka B. Period), especially from VI: 334 items (the Early Dynastic Period); between Levels E and D in Anu ziggurat: copper, gold, iron fragment (iron commoner from the middle of the third millennium; cf. Ur, Royal Cemetery; somewhat earlier occurrences are Tell Asmar, Assur H (and G) = Early Dynastic Period III a(–b)). Metal vessels are used sporadically. Furthermore it is seen that stamp seals were gradually replaced by cylinder seals: Anu ziggurat between Levels E and D; Eanna V–III, and cylinder seal impressions are known from the "White Temple". From Eanna III a life-size head in sculpture is known, and from the same level the famous large alabaster beaker with representations in relief of great beauty and naturalism, besides the Lion-Hunt Stele, and glyptic cylinder

seals. Finally we have sure evidence of the fact that the wheel had been taken into use. The finds of clay tablets with script is extremely significant: pictographical (Eanna IV b-III c), in Eanna III b of the same type as that on the Jemdet Nasr tablets. The latest are the Eanna III a finds; apart from the earliest tablets, the language in the texts has been established to be Sumerian (A. Falkenstein: from IV b on; H. Lenzen: from IV a on).

There is hardly any doubt that our insight into the Warka culture in the south is one-sided in spite of everything; for the lack of grave finds and the strong concentration of the excavations on the temple areas have resulted in the fact that tools and weapons are little known. But it seems that wood, stone, and hard-baked clay was used side by side with metal. The ceramic industry seems to have been mass production; the beautifully executed red and grey vessels, however, become rarer in time. The stone and metal pottery was presumably used for cultic purposes; cultic scenes, often finely executed sculpturally, are dominant on the cylinder seals. Piriform mace-heads presumably can be considered weapons, but no palace or similar larger profane building has been excavated. The temple was the centre of the town and the secular and spiritual leader; the actual ruler in the city community rather held an elective office than a permanent hereditary one.¹ For we dare not yet assume that there was any kingship in Mesopotamia; the large building, 92 × 48 m., standing on a platform, 300 × 200 m., which Stephen Langdon called the "palace" in Jemdet Nasr, cannot be determined as such (E. Mackay: temple).

But in spite of everything we are in the B. Period (the South) of the Warka culture evidently faced with an incipient urbanisation centered round the temples, even though our knowledge is full of gaps, as seen above. Here we find the first beginning of the Sumerian city-state culture, which will be described in Chapter IX. All basic elements are present and even incipient use of writing as a means of expression and aid of the memory has been found. Actually we are in Warka B. on the threshold to Sumerian culture. And it seems evident from a comparison with the north during the same period that Warka B. must have been conditioned, partly by a large population,² partly by a thorough mastery of the difficult art of irrigation in the

¹ Th. Jacobsen in H. Frankfort, *Before Philosophy* (1949), pp. 140 f.

² Cf. A. Falkenstein, *UVB X* (1939), p. 24.

alluvial country. A number of new city-states arise during the Warka B. Period, e.g. Fara, Kish, Jemdet Nasr, Tell Asmar, and Khafājah.

Up in the north, where the country can benefit by the annually recurrent winter rains, which make irrigation superfluous, things are in an equilibrium; the hilly landscape does not possess the rich fertility of the alluvial land, which only needs water in order to give a manifold return at the harvest. In the earliest prehistoric times culture was cradled in North Mesopotamia, but after the Ubaid culture, starting from the south superseded the ancient Hassuna culture and its offshoots, the connexion between the south and the north on the whole seems to have been broken off; only two sherds of Nineveh 5 pottery have been found in the south and no traces of the polychrome Jemdet Nasr Pottery of the south have been found in the north. This is still an inexplicable fact; in the Gawra XIII Period (Ubaid culture) we find great temple building activities, which bear evidence of monumental architecture (see pp. 416, 422); in Levels XI–I we only sporadically find great cultural performances, and only in the beginning of the period. Furthermore, every trace of epigraphy is absent in the north.

In the north monumental architecture is known only from Gawra: XI A, a temple which, if anything, is parallel to the Ubaid temples of Gawra; traces of temples in Levels X–IX; since Gawra XIII we have only in VIII c the richest architectural period: the East and West Temple + Central and North Shrines (with windows as in the Warka temples of Eridu, see p. 428). It seems to appear from the excavations that Gawra X was a fairly large settlement area, which in Gawra IX was greatly declining. Many burials have been found in Gawra, from which appears the use of stone vessels, earthenware, on which see further below, personal ornaments, tools, and weapons. Stamp seals are prevalent, but the southern cylinder seals as the only cultural element have had some influence in the north (Nineveh 5, Gawra VII). Copper was found in Nineveh 4–5, Gawra XI, but most frequently from VIII on. Sculpture was represented by clay figurines in Gawra VIII–VII. The "Eye (or Hut) Symbol", which in this period is known from such settlements as Uruk, Lagash, Khafājah (and Susa C, see below p. 443?) was in the north especially dominant in Gawra XII, XI A–IX, VII C, and in Grai Resh IV–II (and Tell Brak).

The lack of connexion with the south has been ascertained and is strange on a background of the homogeneous unity of the Ubaid Period in Mesopotamia; but still more peculiar is the ceramic heterogeneity between two settlement areas in the north situated so near each other as Gawra and Nineveh. A brief synopsis of the pottery types in the two settlements during the Gawra periods (see p. 424) leaves no room for mistake:

Nineveh

- 3 (in part): Ubaid Pottery.
- 3 (in part): (1) dark grey burnished ware which varies to jet black.
- (2) plain ware light in colour.
- 4: (1) Red-slipped Pottery.
- (2) Pottery with incised decoration (combing is used; also linear incision).
- (3) Reserved-slip ware.
- 5: Painted Pottery exclusively monochrome and never used with a red slip. Strong relief effect; the deeper parts undecorated; animals and birds much used as decoration.

Gawra

XIA-VII hold a special position as regards pottery; they have nothing in common with Nineveh 4, and few correspondences with Nineveh 5. The Painted Pottery known from XI-IX and VIII-VII: brown, red-brown, or buff, tempered with straw; a little grey or black and some greenish pottery (XI-X); light-coloured slip; some jars have a cream slip; dark bluish grey (VIII); wet-smoothed surface, slips: cream, pink, brown; burnishing (VII).

The North Mesopotamian successor to the Ubaid culture seems to have fallen apart; any form of unity is missing and the connexion with the south, whose Uruk pottery has been found in Nineveh 4, Nuzu, and Grai Resh, seems, beyond the ceramic start, to be insignificant, apart from the distant Grai Resh.

On the other hand characteristic monochrome painted pottery like Nineveh 5 (Billah ware), which is quite different from the more southerly polychrome Diyala ware (Scarlet ware), whose motifs and the manner of their combination are quite different, cannot be decisively connected with such Iranian potteries as Hissar II and III, as the type of painting on Nineveh 5 is quite different. It does not take us any farther that some of the pottery forms show points of resemblance with Iranian vessel types. Probably Nineveh 5 is an indigenous product, perhaps under eastern influence. I also think that the two

other painted potteries from this time (Diyala: Scarlet ware, and Jemdet Nasr) at any rate provisionally should be considered as such.

As a result of what precedes the Warka culture may be characterised like this: it was in continuity with the Ubaid culture as regards the architectural building custom, only that the temple complexes grew purely dimensionally in connexion with the great wealth of the city communities. The use of metals, cylinder seals instead of stamp seals, incipient sculptural art, the fixation of the language through an originally pictographic script, the use of the wheel,—all this is a natural consequence of the fact that time passed and the communication with the neighbouring countries, which was already established in the Jarmo period, was intensified. What we observe as a sudden cultural concentration, which points towards the lines by which the historic time was stamped in its beginning, may have been the result of a quiet and slow growth conditioned by the experiences of the time. A more essential factor in the argumentation is the change of pottery from the Painted Pottery of Ubaid to the plain Red and Grey ware of Uruk, but this most remarkable innovation in the country of the two rivers which denotes so great a break with the past, is still of less great effect, because in Warka B. it is supplanted by the old painted ware tradition, which shows itself in three different ways, as mentioned above: Jemdet Nasr, Diyala (Scarlet ware), and Billah wares all show the continuity in the Mesopotamian potter's industry.

§ 11. The period subsequent to the Warka B. stage is generally called the Early Dynastic Period (V. Christian: Plano-convex time). During this period the cultural conquest represented by the Warka culture was continued and enlarged, so that the result presents itself as the formation of a political state with formal laws and a sense of moral order. The community was divided into classes and hierarchies, large-scale cities were built and the urbanisation of the culture was effected. The community, i.e. the city-state, was completely efficient as regards food production, within art and architecture shows monumental traits, and as its established spiritual centre had the city temples, more extensive use of writing, a city "king" with permanent power, which perhaps purely dynastically was retained within the family.

The Early Dynastic Period thus presents itself as a quiet and con-

centrated further development of the B. culture of Warka as regards pottery, art, architecture, glyptic, and script, but from which in outward form it differed by having a plain undecorated pottery (new types, e.g. bell-shaped bowls; spouted libation vases; storage jars; loop handles had gone out of fashion; instead: upstanding lug handles attached to the shoulder of earinated jars, the so-called "granny pots") which gradually became dominant, just as "Riemchen" were replaced by plano-convex building-stones (flat on one face, cushion-shaped on the other). No rupture proper can be ascertained, Warka B. overlaps the Early Dynastic Period on several points, thus in Warka A. and B. the buildings were founded on solid terraces of small oblong bricks ("Riemchen"), whereas the buildings of plano-convex bricks had foundations for which trenches had been dug. But in the Archaic Shrines of Tell Asmar the latter building custom is used also at the earlier stages at which the building materials were not plano-convex. As another example showing how typical criteria for Warka B. and Early Dynastic occur side by side in the same layer, it may be mentioned that seal impressions, as known from seal-impression strata IV-III at Ur,¹ have been found partly at Ur together with the so-called archaic texts, partly at Uruk² together with plano-convex bricks and Jemdet Nasr Pottery. The Ur seal impressions, whose motifs often show a homogeneous pattern, are typical of the Early Dynastic Period, where the archaic texts must be placed. But we have seen plano-convex bricks and painted Jemdet Nasr Pottery in the same level, just as we have previously (p. 425) called attention to the fact that the Diyala (Scarlet) ware as well as Nineveh 5 (the Billah ware) extended a good distance into the Early Dynastic Period.

Through a close study of the excavation results from Tell Asmar and Khafâjah as compared with the other results then known from Uruk, Ur, Tell Al 'Ubaid, Kish, Fara, Lagash, and Assur, Henri Frankfort³ in 1936 divided the Early Dynastic Period into three in a way which in my opinion can still be accepted archaeologically. The earliest part is Early Dynastic I, which is known from Uruk I (part of); Ur SIS IV-V (tablets and seals); Tell Al 'Ubaid (later cemetery); Kish ("Y"

¹ See Woolley, *AJ* X (1930), Pls. XLIX₂ and L₁₋₃.

² E. Heinrich, *Kleinfunde aus den archaischen Tempelschichten in Uruk* (1936), Pl. 16 and p. 10.

³ *OIC* 20 (1936), pp. 35-59.

cemetery), Khafâjah (Sin temples IV-V); and Tell Asmar (Abu Temple: Archaic Shrines I-IV).—Early Dynastic II is represented by Fara (seal impressions); Khafâjah (Sin temples II-III; 1st Temple Oval); and Tell Asmar (Abu Temple: Square Temple).—Early Dynastic IIIa: Kish (palace of mound "A"); Fara (texts); Khafâjah (Sin Temple I; 2nd Temple Oval); Tell Asmar (Abu Temple: Single Shrine Temple); and Assur H-G.

By Early Dynastic IIIb we have reached historic time, which includes the time from Ur I Dynasty and the Lagash Dynasty of Ur-Nina as late as Sargon of Agade, a period from which text material, monumental buildings, and objects of any kind are present in so ample an amount that a historical presentment can be fairly well executed, as has been tried in Chapter IX. Excavation finds without text material from E.D. IIIb are e.g. Kish: "A" cemetery and Khafâjah's 3. Temple Oval. By the period Early Dynastic IIIb we thus take leave of Mesopotamian prehistory, which ends in Early Dynastic IIIa.

§ 12. We have previously mentioned R. J. Braidwood's tentative datings of the Hassuna and Ubaid cultures at about 4400 and 3900, respectively (p. 416). For the following periods, which were mentioned above in Sections 10-11, Braidwood's¹ figures are as follows: Warka A., which Braidwood characterises as a short phase, about 3600; Warka B. about 3500; and the beginning of the Early Dynastic Period about 3200. As none of these three figures are of a binding character, since it will hardly ever be possible to adduce any real evidence in support, we shall investigate whether considerations with an established standpoint later in time will be able to confirm or reject Braidwood's evaluation.

Let it be stated at once that comparative studies cannot take us any farther, e.g.: in the Susa C culture we find for the first time the Proto-Elamite tablets provided with pictographic script (cf. semi-pictographic tablets from Sialk IV), a cultural concentration parallel to that which we observed for the first time in Mesopotamia at Uruk: Eanna IVb. Even if we might approximately date Susa C, centuries might separate these two cultures, which presumably arose spontaneously and independently of one another; at any rate the opposite

¹ *The Near East* . . . (1952), pp. 38, 40, 41.

cannot be proved, for not until historic times as represented by the Ur III Dynasty was the Proto-Elamite script, which was still in use at the time of Sargon of Agade, replaced by Mesopotamian cuneiform. Furthermore the pottery type which we call bevelled rim bowls (p. 423) is also known from Egyptian finds, but the dating of these is uncertain, as either the Early Pharaonic Period (Menes' Dynasty and the following one) or Gerzean (Naqada II) is the possibility offered. Bevelled rim bowls were first found at Uruk: Eanna XII, an early stratum within Warka A., but it should be kept in mind that even if Egyptian Gerzean is dated approximately 3900-3200 (2850), this pottery type still existed in Early Dynastic IIIb: Royal Cemetery at Ur¹ (Ur I Dynasty).² It is impossible to decide when the Egyptians contracted this loan from the east, which probably was indirect from Hama or Tell Jdaidah, where the type also occurs.

From a purely Mesopotamian standpoint the following views may be advanced: Early Dynastic IIIa ends about the year 2460, which after the revision of the Hammurabi date (see Chapter VIII) may be considered the year before Mesannipadda's accession to the throne (Ur I); Early Dynastic IIIb ends about the year 2300 (Sargon of Agade). In this way the time has been limited by the year 2460, and the lapse of time which we must try to date includes the following periods: Warka A., Warka B., Early Dynastic I, Early Dynastic II, and Early Dynastic IIIa.

In a study published in 1941 I concluded with a comparison between Egyptian culture and the peak of the Uruk culture from the period Warka B.,³ which resulted in the adducement of obvious evidence of interrelations between the two cultures mentioned. More closely specified the result was that Uruk: Eanna IV and Menes could be chronologically grouped together. In an attempt at dating Menes I examined the Egyptian material⁴ with the result that the time somewhere between 3100 and 3000 was the most probable possibility; for details see my *Chronology of the Shub-ad Culture* (1941). The starting point was Eduard Meyer's⁵ figure from 1925: 3197, which, however, must be reduced by well over a hundred years, after

¹ Cf. Woolley, *Ur Excavations II* . . . (1934), Pl. 252:21.

² Cf. S. Pallis, *Chronology of the Shub-ad Culture* (1941), pp. 1-37.

³ *Ibid.* pp. 410-28.

⁴ *Ibid.* pp. 410-18.

⁵ *Die ältere Chronologie Babylonien, Assyrien und Ägyptens* (1925).

A. Scharff¹ on the basis of G. A. Reisner's mastaba excavations east of the Cheops Pyramid established the initial year of the Egyptian IV. Dynasty as 2684. Sharff's and my Menes figure (about 3050) has later partly been raised, partly been reduced (J. W. S. Sewell 1941:² 3188, Hanns Stock 1949:³ 2830). It is up to future research to judge these three Menes figures, perhaps on the basis of new finds or observations.

Our final judgment then will be this: for the time before about 2460 we have the following periods to consider in the time from Menes on, in which Uruk: Eanna IV culminated:

Warka B.: Eanna III, II.

Early Dynastic: Eanna Ib (transitional period, in which "Riemchen" were used and supplanted by plano-convex bricks).

Eanna Ia (only use of plano-convex bricks).

The fact that H. Frankfort, as mentioned above, p. 433, has three Early Dynastic periods (E.D. I, E.D. II, and E.D. IIIa) is due to the special finding circumstances at settlements outside Uruk. Nobody can decide whether we shall assess 600 years as duration (Scharff-Pallis' Menes figure) or 400 years (Stock's Menes figure). All that can be stated on a rough estimate is that Braidwood's estimated figure, about 3200, for the beginning of the Early Dynastic Period must be too high and must be reduced by some 150–350 years. However, it does not follow from this that Braidwood's tentative figure for the earlier preceding periods (see pp. 416, 434) should also be reduced, for on these figures we cannot make any statement at all. All that we know is that they must be later than the radioactive carbon date of Jarmo about the year 5100.

In what precedes we have stated that until further confirmation or the opposite is available, we must lean on the C 14 dating of Jarmo. I still hold to this view; but as in the present section we have considered Egyptian datings for argumentative support, we should finally mention two radiocarbon dates from Egypt. They were found in

¹ *OLZ* 1928, cols. 73–81.

² Cf. S. R. K. Glanville, *The Legacy of Egypt* (1943), pp. 1–16.

³ *Die erste Zwischenzeit Ägyptens* (*An. Or.* XXXI, 1949).

1950 and this figure should consequently be deducted from the datings: Menes 4883 ± 200 or at a maximum 3133, which is in close agreement with Scharff-Pallis, at a minimum 2733. The C 14 dating for the initial year of the Egyptian IV. Dynasty, which Scharff determined as 2684, however, is: 4802 ± 210 or at a maximum 3062, at a minimum 2642. Only the minimum figure is in close agreement with Scharff's Snofru figure. But what in our view is most important is this: I. Dynasty (Menes) and IV. Dynasty are separated by only 71 or 91 years according to the C 14 figures, if we accept the maximum or minimum figures, respectively, and this space is too short to cover the first three Egyptian dynasties. Radiocarbon dates should therefore be handled with care. Braidwood's initial figure for the connected Mesopotamian neolithic cultures: Hassuna about 4400, is therefore no doubt due partly to his reliance on radiocarbon dates, partly to his conviction of the relative contemporaneousness of the Hassuna culture and Egyptian Fayum A, the C 14 figure of which is 6095 ± 250 or at a maximum 4395, at a minimum 3895. As a starting point of Mesopotamian prehistory I accept this, as there is still no other possibility if an approximate figure is to be given.

These three figures: Ur I Dynasty c. 2460, which is based on chronological investigations, and two C 14 dates, one of which, the former, has been obtained by an estimated comparison with a prehistoric Egyptian site: Hassuna about 4400, and Jarmo about 5100 are extremes of our Iraqi prehistoric chronology: the interval between the beginning of the Hassuna culture and the historic time authenticated by texts of e.g. Ur-Nina at Lagash cannot be more closely defined through absolute figures. The roads which it has been tried to tread in order to have this great Mesopotamian prehistoric material ranged in general chronology are barred.

Attention has been called to the building levels found by excavation expeditions in practically all settlements, among which levels naturally those of the temple areas, gradually in time increasing into large complexes, are the most dominant. As to ordinary private dwelling-houses they were in the Iraq of Antiquity as well as in that of the present time, as I have personally convinced myself, built of mud bricks (*libn*), as the habitations in Mungo Park and René Caillié's West Africa. Sir Leonard Woolley¹ declares that the mini-

¹ *A Forgotten Kingdom* (1953), p. 25.

mum of the average lifetime of a mud-brick house is 30 years, but that "a mud-brick house if well built and reasonably well looked-after will quite easily last for 100 years."¹ Here the latitude is too wide, from 30 to 100 years, apart from the fact that no two major city areas in Mesopotamia can be supposed to have had so uniform living conditions climatically as well as socially and economically, warlike invasions and destructions even being completely disregarded, that we can expect to obtain a result in absolute figures which are reliable. If, for instance, we take Gawra with the 26 levels, the XXVIth of which perhaps represents the Hassuna culture,² while V with certainty covers the Sargonic Period, which begins about the year 2300, and if we take the maximum lifetime of mud-brick houses, we get $100 \times 20 + 2300 = 4300$ as the possible year of the succession of the Hassuna culture by the Hassunan-Halaf Period at Gawra, but we can hardly believe that Hassuna Ia, Ib-c, II-VI (see above pp. 403-04) can be covered by only 100 years, as in Hassuna we have 8 levels here, which with the minimum figure for the lifetime of mud-brick houses gives $30 \times 8 = 240$ years. As is seen, we have used maximum and minimum figures at the same time; the calculation cannot be made. Furthermore, we should keep in mind the latitude between 30 and 100 years. If for Gawra we take the minimum figure 30, we get $30 \times 20 = 600 + 2300$, or the result that Hassunan-Halaf should be dated at the year 2900 which is impossible.

Nor is the estimated dating of the temple areas a passable road. Pinhas Delougaz³ has pointed out the term of years of 100-140 as the lifetime of a temple before it was rebuilt, and taking as his starting point the six Sin temples at Khafājah, he arrives at the following result: 6×140 (maximum) + 2335 (Delougaz's Sargon figure) = 3175, or the year of the beginning of the Early Dynastic Period I, the erection of all the Sin Temples falling within the Early Dynastic Period. This figure, 3175, is almost identical with Sewell's year for the beginning of the First Egyptian Dynasty (see p. 436) and cannot be accepted by me, who in what precedes have chronologically paralleled Uruk: Eanna IV and Menes. The minimum figures $6 \times$

¹ *Ibid.* p. 87.

² The matter has not yet been elucidated; cf. Braidwood, *JNES* IV (1945), p. 256⁴ and *Journal of World History* I (1953), p. 306. Cf. also above pp. 406, 416.

³ *Pre-Sargonic Temples of the Diyala Region* (1942), pp. 126-33 (OIP LVIII).

$100 + 2335 = 2935$ for the beginning of Early Dynastic I, on the other hand, leaves only a distance of $3050 - 2935 = 115$ years for the periods Uruk: Eanna IV, III, II with the subsections of the two first periods, a space which seems to me to be too small and which cannot be correct at all if we multiply the number of Uruk temples from these three periods by 100 or 140.

Finally we shall mention an equally impassable road: the attempt at drawing chronological conclusions from the layers of débris in an excavation area. A deterrent example from Koldewey's Babylon excavations is the following (cf. above in Ch. VI A. § 7, p. 324): a layer of débris 21 m. thick was found at 'Amrân, the corresponding layer at Merkes was only 6 m. thick. From this it was not allowable to conclude that 'Amrân showed a building stratum of a chronologically more than three times longer duration than that of Merkes; they were of the same age, but the colossal building remains of the Esagila temple had increased the mass of débris more than three times in relation to that of Merkes.

§ 13. A survey of the experiences reaped so far, as regards Mesopotamian prehistory from the Neolithic to the time of Sargon of Agade, is perhaps made in the best way as in the following synoptic table (P.P. = Painted Pottery).

Years	Cultures	Potteries
	Shanidar A (bottom layer)	
	Zarzi (top layer)	
	Karīm Shahr	
ab. 5100(?)	Jarmo	
ab. 4400(?)	I. Hassuna Culture (Hassuna, Matarrah, Nineveh, Arpachiyah (?), Gawra (?), Baradost, Hazer Merd (Eastern Cave), Tell Ibrahim Bayis (Makhmur Plain), Samarra, Kifri (?), Eridu (?))	(a) coarse burnished with a dark core. (b) "archaic" (also P.P.). (c) "standard" (also P.P.). (d) Samarra (P.P.). (e) Halaf (P.P.).

Years	Cultures	Potteries
	II. Ubaid Culture (Eridu, Tell Al 'Ubaid, Ur, Uruk, Hajji Muhammad, Raidau Sharqi, Tellioh, 'Ukair—the above- mentioned Hassuna assemblages, Gawra, Arpachiyah, Nineveh (?), Nuzu, Grai Resh)	(a) "Eridu" ware (P.P.) (b) Hajji Muhammad (P.P.) (c) Ubaid (1. Southern— 2. Northern) (P.P.)
	III. Warka Culture (Uruk, Ur, Fara, 'Ukair, Tell Asmar, Khafajah—Gawra, Nineveh, Nuzu, Grai Resh)	
	A B ↓	Black, Grey, and Red ware P.P. wares: (1) Jemdet Nasr (also unpainted) (2) Diyala (Scarlet ware) (3) Nineveh 5 (Billah ware)
	Early Dynastic Period I	(a) Plain undecorated pottery (b) Survivals of Warka B.'s P.P.
	II	
-2460	IIIa	} Plain pottery
2459-2304	IIIb	

§ 14. From the cultural stage Hassuna I b on we dare consider the inhabitants of the settlements as conscious food-producers. Already earlier we have from Karim Shahir, Jarmo, and Hassuna I a evidence of harvesting, though we dare not assume that there was any more than a hoe-culture. It will then be natural in these last sections to consider whether the three above-mentioned prehistoric Mesopotamian cultures on this point, the food-producing, were originally creative and were the starting point of this new cultural phase, or whether foreign influences were decisive, i. e. the interrelations must be surveyed. Finally an attempt will be made at finding out whether it is possible to connect one (or two or all) of the three cultures with definite peoples later known in historic times, when we have textual evidence.

To begin with we shall remind of the fact previously pointed out: that geomorphological considerations make it obvious that in North Mesopotamia we find cultural traces from the Middle Pleistocene Age on, as the country as grass-land and mixed woodland with regular rainfall as far as the neighbourhood of Kirkuk can in many respects be termed self-supporting, apart from the supply of obsidian and metals. In the alluvial country of South Mesopotamia, on the other hand, everything must be imported, even wood and stone, which in most other places in the world belong to man's natural environment, and furthermore flint nodules are missing. Such a material need forces the inhabitants to trade and to introducing energetic industrialisation of the grain-bearing faculty of the soil through irrigation channels to the large rivers in order to create a surplus of grain which may be used for barter. In North Mesopotamia life is somewhat easier. This presumably explains why in the long run it was the inhabitants of the South Mesopotamian country who became creative within culture in a higher and proper sense of the word.

The objects of obsidian, malachite, turquoise, lapis lazuli, and of metals found at the Mesopotamian excavations thus are clear evidence of interrelations. Already the Shanidar and the Jarmo cultures used obsidian, the Hassuna Period: obsidian, malachite, and turquoise, from the transitional Ubaid-Uruk Period in Gawra (Level XII) lapis lazuli is known. The earliest material imported into Mesopotamia for tools, parallel to European flint and found together with this, but in greater amounts, obsidian, had from its centre, which perhaps was Armenia, a very wide distribution. We find it most westerly in the Cyprus and Mersin Neolithic. It is possible that there were other centres, but to the inhabitants of North Mesopotamia Shamiramalti (Tilke Tepe) near Lake Van was the nearest. From the Halaf Period of Hassuna we have evidence of quarrying of obsidian there:¹ hundreds of obsidian knives and 20 cores were found (the largest weighing 25 pounds); but of course this does not mean that the original settlements of the Jarmo and Hassuna people were around Lake Van, it only indicates trade relations. – Finds of malachite and turquoise from the Hassuna Period perhaps indicate communications with Sinai and Nubia.

On the importation during the time from Early Dynastic III b on

¹ See Robert H. Pfeiffer, *BASOR* 78 (1940), p. 32.

of rare kinds of wood and of expensive kinds of stone such as diorite, porphyry, basalt, marble, and bezoars (? *pf šabīti*), as well as of a number of semi-precious stones (e. g. lapis lazuli, amazonite) as well as the provenience of the imported articles the reader is referred to Chapter XII. But in connexion with what has been stated above only the metals will be mentioned. Even though the last Hassuna cultural period which we have named the Halaf Period shows chaeolithic traces, metals are not used to any appreciable extent until the Warka Period.

While the silver from the Taurus in Cicilia, known from the Warka Period, was not actually imported until the period of Sargon of Agade, but later was imported from Tabal (the Taurus area) and Armenia as well, and while gold, which came from the mountainous country between the Nile and the Red Sea, later also from Nubia, was not known to any appreciable extent until the Kassite Period, copper, lead, and tin were those metals which were important as imported articles in Mesopotamian prehistory (Warka Period). The provenience of copper cannot be decided with certainty. The possibilities are Magan, i. e. Oman in East Arabia on the Persian Gulf; the very distant Cyprus which was a large-scale exporter of copper to Egypt; Sinai; Anatolia; or Elam in the east. The lead was obtained from the Taurus, and in this connexion it is worth noting that the first copper implements were made alloyed with lead or antimony, while the real tin bronze was not known until Early Dynastic III or after this period, when tin was imported from the Iranian plateau.

Thus it seems possible to establish the occurrence of some metal centres in the Middle East in prehistoric times, having in mind the above-mentioned finding-places of copper. H. Frankfort's¹ hypothetic centre in Transeaucasia presumably can only apply to the inhabitants of North Mesopotamia. At a certain time the distribution of metal objects was extremely wide, e. g. the perhaps commonest article for everyday use, the knot-headed pin, has been found from Gerzean Egypt to Sialk IV in Iran. Both of these cultures seem coeval with the Mesopotamian Warka Period. In this period Mesopotamia may in part be characterised as a metal centre: metal types from this time which have their starting point in Gawra VIII are found again in

¹ *Sumerians, Semites, and the Origin of Copper-Working* (AJ VIII (1928), p. 233).

Sialk III 4¹ and Susa B.² Furthermore the shaft-hole axe (clay models from Ubaid times found at Ur and 'Ukair) cast into metal spread to Caspian steppes and further to India. But the fact that Mesopotamia was a centre of the distribution of certain metal types in the heyday of Warka, of course does not prove anything as regards Mesopotamia as the original focus of metallurgy. – Such a focus hardly existed. The preparation of metal implements everywhere in the Middle East took place in continuation of the manufacture of flint, obsidian, and stone implements at the moment when copper became known and showed its strength and durability; especially in South Mesopotamia, where all raw materials for tools and weapons had to be imported, the triumphal progress of metal presumably took place faster than in the north.

An ingredient of Mesopotamian everyday life just as necessary as tools and weapons was the kitchenware. Here we find in Mesopotamia repeated changes of pottery from time to time so that a plain, undecorated pottery ware was known in three periods: the earliest Hassuna Period – the Warka A. Period – Early Dynastic II–III a–b. In between, 10 different types of Painted Pottery were produced in the course of time. These were expressive of the desire of the various periods for modestly as well as with a brilliant result (Arpaehiyah) producing a more or less conscious artistic decoration of the articles for everyday use. Altering types and forms of the kitchenware were expressive of experiences which partly aimed at making the applicability of the pottery more perfect, partly at pleasing the eye. It is not beyond possibility that the Uruk true and fast potter's wheel (as well as the wheel of vehicles) was a Mesopotamian original creation; in the east we do not find it until the so-called Hissar Culture (Sialk III, Chasmah Ali I B and Hissar I). I think that the slow-wheel (*tourne*tte), which was used in the Iranian "Buff-ware culture", is the model of the fast-wheel; but it was the invention of the latter that made mass-production possible.

If therefore we try to use changes of pottery, as regards surface treatment and decoration as well as typology, argumentatively to define

¹ From Sialk I three awls of copper are known; in Sialk III 1–3 the use of metals is more common, in Sialk III 4 common.

² New terms to denote the Susa culture are: Susa A = Susa I; Susa B 1–3 = Uruk Pottery Period; Susa C = Jemdet Nasr Period = Susa II; Susa D 1–2 = Early Dynastic Period.

changes of population, invasion of foreign peoples and the like, the road, in my view, is barred. In what precedes I have (cf. p. 443) emphasised the universal urge towards decoration as well as towards an improvement of articles for use as prime movers, but still the existence of e.g. ten different Painted Pottery wares also invites caution. What is of importance at the study of the pottery of any province, on the other hand, is the insight into relative chronology which is acquired in this way. Flinders Petrie in his *Tell el-Hesi* publication of 1891 has expressed it like this: "Once settle the pottery of a country and the key is in our hands for all future explorations. A single glance at a mound of ruins will show as much to anyone who knows the styles of pottery as weeks of work may reveal to a beginner." This point of view was made victorious by Flinders Petrie in *Diospolis parva* (1901), in which the graves on the western bank of the Nile near the large fellah village of Hû were arranged in chronological order on the basis of the pottery found. Changes of pottery and the arrival of other people need not have anything to do with one another; only compare the development in France from the foundation of the Sèvres factory in 1756 to the present day; the same people, speaking the same language have been the bearers of these 200 years' ceramic development, but of course influence from abroad can be traced in this or that period.

In what precedes, "influence" from abroad, or perhaps better, parallels, can be established from the west as well as from the east:

- A. The West: (1) Mount Carmel (Tabun B), Palestine: the Flake industries of Hazer Merd and Shanidar D (see above p. 391).
 (2) Jericho X–XVII; Mersin Lower Neolithic B; Ugarit V, Cyprus Neolithic I: the stone vessels of Jarmo (see above p. 401).
 (3) Jericho IX, Cyprus Neolithic I: the inportable pottery of Jarmo (see above p. 399).
 (4) Mersin XVII, 'Amuq A: the "archaic" pottery of Hassuna (see above p. 404).
 (5) Mersin, Ugarit, Jericho VII, Cyprus Neolithic I–III: the tholoi of Apachiyah and Eridu XVIII–XV (?) (see above pp. 409, 415).

- B. The East: (1) Sialk II: the extremely long square *libn* of the Gawra Temples XVI–XIV (see above p. 415).
 (2) Bakun A \neq the Hajji Muhammad Pottery (see above p. 415).
 (3) Iranian "Buff-ware" \neq the "Eridu" ware and the Ubaid ware (see above pp. 418–20).
 (4) Hissar II and III \neq Nineveh 5 (see above p. 431).

It is noted that the western influence ranges from the Upper Palaeolithic to the Halaf Period of Hassuna, which is the last period of this culture, while the eastern influence cannot be traced until the Ubaid Period. This should be remembered in connexion with the fact that the alloy of copper and lead, the latter coming from the Taurus, is earlier than that of copper and tin, the latter coming from Iran (see above p. 442), so that the western influence, besides being the primary one, also shows a closer connexion, as the lead bronze dates from the Warka Period, the tin bronze from the Early Dynastic Period.

As emphasised above, p. 405, I must definitely keep aloof from Donald E. McCown (1942) and Ann Louise Perkins (1949) including Hassunan Samarra pottery, which is paralleled with Bakun B II, among influences coming from the east. Also from André Parrot¹ on the basis of a comparison with Anau II, Bakun A V and Susa B 1–3 maintaining the eastern origin of the Uruk ware. I have above, pp. 418–20, taken a relatively positive attitude, as also appears from the survey above, towards a relation between the Iranian "Buff-ware" and the genesis of the Ubaid pottery, as also pointed out by McCown, Perkins, and Parrot,² but deep down I am not fully convinced. Above pp. 396–97 I have mentioned that the shadow of Susa A (= Susa I) broods over the studies of Mesopotamian pottery; in the present day nobody thinks that the Susa A pottery is earlier than and the model of Mesopotamian Ubaid. Or we may quote Braidwood's³ words: "We feel that the assumption of Iran's priority may be simply an aspect of the fact that prehistoric painted pottery was first noticed in Iran, and that it does enjoy a considerable flourish there."

The western definite and the eastern later and more doubtful in-

¹ *Archéologie mésopotamienne* II (1953), pp. 306 f.

² *Ibid.*, p. 210.

³ *Journal of World History* I (1953), p. 309.

fluence on the two earliest prehistoric cultures of Mesopotamia (Hassuna, Ubaid) may be explained by the fact that from the Mesopotamian Hassuna Period on, about 4400, a number of neolithic cultures existed in the area which James Henry Breasted¹ as the first, as early as 1916, pointed out and named the "Fertile Crescent", which we now by virtue of results of excavations since 1918 may define more closely as the hilly flanks above the Breasted "Crescent"; most of these settlements to begin with, like Hassuna, had a monochrome pottery before the appearance of Painted Pottery, e. g. Sakje Geuzi, Tell Halaf, 'Amuq. Counting from west to east these settlements are:

Fayum A
 Ugarit V
 Cyprus Neolithic
 Mersin (lower)
 Kara-Su (near Sakje Genzi)
 'Amuq A
 Jericho IX
 Hama M
 Tell Halaf ("altmonochrom")
 Hassuna
 Bakun B I
 Sialk I.

Notes: (1) Cyprus Neolithic I and Jericho X-XVII represent older communities. - (2) Hassuna is perhaps a step more advanced, i. e. younger, than Mersin Neolithic and Jericho IX.

As we have included Mesopotamian Hassuna, we thus get 12 settlements which we consider approximately contemporary, all of them food-producing, and, as regards implement culture, rather uniform as a consequence of the fact that the demands made on life which were to be fulfilled were in a direct ratio to the insight and the resources of which man was in possession at the early neolithic stage. To speak about a connected cultural zone from Egypt by way of Cyprus as far as Sialk and Bakun, borne by an ethnologically and racially homogeneous population with the same language, would seem the boldest assertion ever heard. It is only a question of small neolithic communities

¹ *Ancient Times* (1916); cf. also his *The Oriental Institute* (1933), pp. 77 ff.

which were parallel in time and rather homogeneous as regards implement culture, – communities the existence of which, like its incipient agriculture, was conditioned by settlement in regions in the Middle East which had some rainfall. The earliest settlement layers from these village areas seem to be (from west to east): Jericho X–XVIII, Mersin Lower Neolithic, the deepest layers at Ugarit and in Cyprus Neolithic I, all of which it seems possible to parallel with Karim Shahir (?) and Jarmo. But whether we are thinking of the Jarmo or the Hassuna period, we are unable to point out a centre from which the impulses as regards implement culture proceeded. It can only be established that all the settlements mentioned show the presence of obsidian and that Lake Van is the possible centre for this rock. But wanting to measure the mileage from Lake Van to the 12 settlements mentioned above as well as to Karim Shahir and Jarmo, and then to draw conclusions as to priority and the relative age would seem quite mistaken. We do not know anything at all about the interrelations of the settlements mentioned and cannot establish anything as regards "connexions" or "influences", and our survey (pp. 444–45) then only establishes parallels between the settlements as regards their implement culture.

But in the Early Dynastic Period the question about interrelations becomes concrete. There we may establish importation of manufactured goods found e. g. at Ur and Khafājah from the Kulli culture in East Persian Makran, from the Indus culture of Harappa, just as, inversely, Sumerian manufactured goods have been traced as far as the Indus valley, e. g. the chalice pottery type from Kish ("A" cemetery and another type cf. Nineveh 5) in the Harappa culture.

§ 15. In the time after 1877 Ernest de Sarzec excavated the Sumerian dynasty culture in the city area of Lagash, the present Telloh. Both linguistically and culturally Assyriological research was there for the first time obviously faced with the culture which was previously known only from the bilingual syllabaries and which clearly testify to the existence of another type of man and quite a different type of language than the one known from the ruin mounds of North Mesopotamia (Khorsabad, Ninrûd, and Nineveh: Kuyunjik), the bearers of Semitic culture with whom research from the year 1842 on had become familiar through monuments, relief representations, and inscriptions. During

the period from 1874 to the close of the eighties J. Halévy and his adherents tried to convince the Assyriologists that only one people had lived in Mesopotamia and culturally determined the development: the Semitic Babylonians and Assyrians, but after the Halévy episode had proved abortive by the absolute victory of the Sumeriologists, the question might be raised as to the priority in Mesopotamia. On the basis of a material which in our view, because of the weight of later material, was quite incomplete, Eduard Meyer¹ in 1906 thought it possible to establish the existence of three different races in Mesopotamian culture: Sumerians, Semites (Assyrians and Babylonians), and Bedouins (of West Semitic origin). His starting point was the purely external consideration of the manner of dressing the hair and beard in relief representations or representations of a sculptural monumental kind. As to the chronological relations Ed. Meyer considered the Sumerians a people later invading a country inhabited by Semites, but it should be emphasised that the results of the following two decades in 1925 made him² more reserved in the use of a categorical mode of expression.

As to the peoples which were the best known in historic times and of which the two for long periods were the rulers of Mesopotamia, the following should be mentioned:

- (1) Sumerians (established through language and script with certainty from the Warka B. Period: Eanna III, perhaps already from Eanna IV (see p. 429).
- (2) Semites (earliest are (a) the Kishites or Agadeans, who are the first Semites known to have organised city-states, (b) mixed with the Amorites coming from the west from about the year 1900 (Sumu-abum 1894–1881) on, so that the result was (c) Akkadians, in the south: Babylonians, (d) in the north: Assyrians, whose language was an Akkadian dialect. The population in the north seems to have been the result of a Subarian basic substratum, on which Sumerians and an invading people, the Assyrians, immigrated earlier than the Amorites in the south, settled; see further Chapter XI).
- (3) Subarians (from the period of the Fara texts (Early Dynastic

¹ *Sumerier und Semiten in Babylonien* (1906; Abh. d. Kön. Preuss. Akad. d. Wissensch.).

² *Geschichte des Altertums*⁴ I (1925).

III a) to the Kassite period inhabitants of North Mesopotamia side by side with Sumerians and Akkadians).

In prehistoric times we should as important cultural factors mention: unknown western peoples and unknown West Iranian peoples (perhaps with a Northeast Iranian substratum?). On the other hand, the invading peoples coming from the east, such as Awanites, Lullubians, Gutians, and Kassites do not concern us in this chapter. Nor do the Aramaean Chaldaeans (Ahlamu) from the west. These peoples will be mentioned in the chapters dealing with Mesopotamian historic times.

In an attempt at understanding the relation in prehistoric times chronologically as well as culturally between the three peoples mentioned above, viz. Sumerians, Semites, and Subarians, research has as its starting point partly tried to find firm moorings by observing the Mesopotamian changes of pottery last mentioned on pp. 439-40 in schematic form, partly through the study of the crania and other parts of skeletons found by the excavation expeditions; to these two procedures I shall further add the experiences which the burial methods of the sites can give us. Introductorily it should be mentioned that research-workers have also tried to form an opinion of the home country of one of these peoples, the Sumerians, reflexions which are independent of studies on pottery types as well as remains of skeletons found in the soil, whereas the time of the supposed arrival of the Sumerians in Mesopotamia has only been made dependent on the question with what pottery type they have been firmly associated.

§ 16. Only late in Assyriological reflexions have the Subarians entered the picture among the prehistoric peoples of Mesopotamia. From the Assyrian royal inscriptions the province of Subartu was known from the early period of research. The inhabitants of Subartu were named Subari or Šubari, and the localisation of the country-area was determined by the route of their conquests described by the great kings. The result seemed to be the northwest in relation to Assyria. From the findings of texts at the excavations of Assur originates a description of Sargon of Agade's empire, from which it appears that Subartu extends from the Elamite district Anzan (Southwest Iran) as far as the "Cedar Mountains", i. e. the Amanus or Anti-Taurus. And in one of the inscriptions of Naram-Sin Subartu and Elam are seen

as neighbouring states. The inhabitants of Subartu (Su-bir₄) were already through the Fara texts (Early Dynastic III a), published in 1923-24 by A. Deimel, found to inhabit Mesopotamia side by side with Sumerians (and Akkadians). Besides, the earliest known historical city rulers of Assur, Ushpia and Kikia perhaps bear Subaraic names.

It was with the above-mentioned observations as starting point that Arthur Ungnad¹ in 1923 suggested the existence of an aboriginal people the distributional area of which extended from the Iranian Plateau to the Mediterranean: the Subarians. These were also the autochthonous inhabitants of the Mesopotamian country; the Sumerians did not until later invade the South Mesopotamian area, from where the high culture created by them took its starting point. Still later comes the invasion of Mesopotamia by the Semites. In a work from 1936² Ungnad elaborated his ideas in more detail.

Ungnad's great visions were based on belief in, i. a., Sargon of Agade's victory inscription, which cannot be checked. It is possible, but far from certain that a Subaraic substratum enters into later polities such as Mitanni-Hanigalbat, Nairi, Urartu, all this depending on the importance being attached to the Sargon inscription. But after the Kassite period only the northwest country Subartu seems to be mentioned, not the people, except as isolated designations for "slave", which suggests that the importance of the Subarians had been extremely reduced.

In 1930 Ephraim A. Speiser³ published an important study, which perhaps in the main may be characterised as a continuation of Ungnad's hypothesis; but it yielded a positive contribution which endures to this day. An examination of a number of place-names from Sumerian times such as Larak, Zimbar, Shuruppak, Zagar, convinced Speiser that these were not Sumerian, but were of an Elamite character. It is a well-known fact, to which for parallels reference should be made only to the results of recent Balkan philology, that the town- and place-names of the autochthonous population as a rule are retained by invading and conquering people. From this incontestable fact Speiser drew the following conclusions which cannot be proved: the earliest inhabitants of Mesopotamia were Proto-Elamites, but the

¹ *Die ältesten Völkerwanderungen Vorderasiens* (1923; *Kulturfragen* I).

² *Subartu. Beiträge zur Kulturgeschichte und Völkerkunde Vorderasiens* (1936).

³ *Mesopotamian Origins* (1930).

country was later invaded from the northwest by the Subarians (whom Speiser term Hurrians, on whom see below) in the Jemdet Nasr Period (i. e. Proto-literate c-d; see above p. 424), followed by a considerable contingent of Semitic people; in the south the Sumerians had from the Persian Gulf overrun and occupied this part of the country.

In 1931 Max von Oppenheim¹ published a preliminary report on the results of the Tell Halaf excavations. There it was asserted that the Halaf ware was of Subaraic origin, a suggestion which was later supported by Bedřich Hrozný.² It should be stated in this connexion, that no actual Halaf assemblage has been found out of Mesopotamia, as pointed out above, pp. 407 f., and that the first finding-place of the Halaf pottery (moreover only entering into some pottery sequence) may hardly be identified with the earliest one, so that the view of Tell Halaf as the provenience of the Halaf pottery can hardly be maintained. The excavations at Uruk in the 1930's, however, were to give still another background to the views of the Subarians and their culture. The orthostats of the Kapara palace had by Ernst Herzfeld, in Appendix I to M. von Oppenheim's above-mentioned publication on Tell Halaf from 1931, been dated at the period 3100-2900;³ the famous Lion-Hunt Stele from Uruk, which is one of the treasures of the Iraqi Museum in Baghdad, found in Uruk: Eanna III was, amongst others by me, connected with the Tell Halaf orthostats, with the result that Subaraic influence was thought to have been established in the Warka culture,⁴ a view which was supported by Mesopotamian seals.⁵ I dare not maintain these views any longer after obtaining knowledge of A. Götz's⁶ chronological studies and Ignace J. Gelb's⁷ investigations. Especially the latter has convincingly asserted that Subarians and Hurrians have neither geographically nor politically anything to do with one another, just as the Subarians presumably were linguistically and ethnically connected with Gutians, Lullubians, and Elamites, while the Hurrians were linguistically related to the Urartaeans and

¹ *Der Tell Halaf* (1931).

² *Die älteste Geschichte Vorderasiens und Indiens* (1943), pp. 36-37.

³ Herzfeld has maintained his chronology in *Archaeologische Mitteilungen aus Iran* VI (1934), pp. 111-223, though lowering the limit to about 1800.

⁴ See e. g. S. Pallis, *Chronology of the Shub-ad Culture* (1941), p. 409.

⁵ *Ibid.* pp. 95-96, 98-99; cf. also my *Babylonisk Kultur* (1948; Danish), p. 61.

⁶ *Heitiler, Churritler und Assyrier* (1936).

⁷ *Hurrians and Subarians* (1944; SAOC XXII).

known from the Mitanni letters of Amarna, personal names from Kirkuk, Nippur, and Nuzu texts, just as extra-Mesopotamian sites like Boghazkeui and Ras Shamra (Ugarit) have provided us with greater insight into the Hurritic language.

So we have today the following results left: (1) several Sumerian place-names are not Sumerian from a linguistic point of view, but point towards the east, (2) the last period of the Hassunan ceramic culture, above, p. 439, characterised by the Halaf pottery, denotes a ceramic innovation which is not identical with "standard" Hassuna and the Samarra ware. The problem then is whether a Subaraic substratum of population asserts itself in both of these facts, so that the Subarians can be supposed originally to have been the autochthonous inhabitants of North Mesopotamia with markedly eastern linguistic affinities, and that this Subaraic substratum at a late stage of the Hassuna culture inspired this as regards pottery; or that the bearers of the Hassuna culture simply were the Subarians.

I do not think that any of the problems or questions can be solved or answered by means of our present knowledge. Probably we shall never be able to make any statement to that effect. Only two things seem certain to me: in the first place, we know nothing about the Subarians in Mesopotamia from before the Fara texts dating from Early Dynastic Period III a; this period was late, ending about 2460; see p. 440 above. Secondly: we do not know at all whether the place-names Larak, Zimbar, Shuruppak, and Zarar (see above p. 450) are Subaraic; we only know that they are non-Sumerian and also probably pre-Sumerian. As a result I am of opinion that the Subarians should so far only figure within the account of the Mesopotamian historic period.

§ 17. During the period from 1924 to 1948 a number of opinions – for they cannot be called more than that – based on the above specified changes of pottery in Mesopotamian prehistory (see above, pp. 439–40) have seen the light, attempting to attribute the cause of the changes to the arrival of the Sumerians or the Semites in Mesopotamia. For it has for a long time been an obvious presupposition to Assyriologists that these two peoples invaded Mesopotamia, in the case of the Sumerians mainly because they partly in their script have the same sign for "country" and "mountain", partly build mountain-high temple com-

plexes (ziggurats), both facts being interpreted as indicating that they were a mountain people who from mountainous regions invaded the flat alluvial country of South Mesopotamia. The Semites otherwise live in the west and those living most easterly therefore are supposed to have invaded Mesopotamia from the west.

Neither of these arguments has any really binding force. And as to the linkage of Sumerians or Semites with one of the above, pp. 439-40, mentioned more than ten different pottery wares, such opinions are just as irrelevant. We do not possess any foundation at all on which to support such a hypothesis. The following chronological enumeration of prominent scholars' opinions (also opinions independent of the changes of pottery) therefore is mainly adduced for the sake of purely historical interest.

11. Frankfort (1924):¹ An Anatolian or North Syrian culture, which was borne by Semitic peoples and culturally expressed in the Jemdet Nasr Pottery, was in North Mesopotamia pushed back by invading Sumerians; Ed. Meyer's hypothesis from 1906 might hence be supposed to have a come-back. Frankfort has later abandoned this theory.

Ernest Mackay (1925):² The plano-convex style of building and the Sumerians insolubly belong together; this was before the finding of Sumerian texts from Uruk III.

J. Jordan (1932):³ The arrival of the Sumerians in Mesopotamia can probably be dated at the Uruk VI period.

H. Frankfort (1932):⁴ The Sumerian culture prevailed from the earliest time, the Ubaid period (which in 1932 was considered the earliest), was an element of a culture which extended as far as the Indus, and was broken off from its cultural associates by an invasion of Japhetic people, i.e. the Uruk culture, about which Frankfort as well as others could know very little at that time (1932). – In 1941 I⁵ drew the conclusion that the Sumerians already in the Ubaid period were inhabitants of South Mesopotamia, mainly building upon the continuity as regards the pottery forms of the kitchenware; when later the excavations in Eridu (1946-49) showed temple buildings of the

¹ *Studies in Early Pottery of the Near East* 1 (1924), pp. 91-92.

² *Report on the Excavation of the "A" Cemetery at Kish, Mesopotamia* (1925; *Field Mus. of Nat. Hist., Anthropol., Memoirs* 1 1).

³ *UVB* 111 (1932), p. 36.

⁴ *Archeology and the Sumerian Problem* (1932; *SAOC* No. 4).

⁵ *Chronology of the Shub-ad Culture* (1941).

Sumerian architectural type, the proof seemed given at once, but it should be kept in mind that the victorious Semites used the Sumerian type of temple, the Sumerian ritual as well as parts of the Sumerian pantheon so that the actual proof is missing.

Thorkild Jacobsen (1936):¹ It is highly probable that the bearers of the Uruk culture were the Sumerians. This view was accepted by E. A. Speiser² in 1939.

B. Hrozný (1943):³ Like other scholars he supposed that the original home of the Sumerians was somewhere in Central Asia and that from there they had by way of Iran migrated further and in two waves with a considerable lapse of time between them had arrived in Mesopotamia: (1) the Ubaid culture, (2) the Uruk culture; the later invasion went farther north to Transcaucasia and from there to the Uruk area. We see here two different ceramic industries covered by the Sumerians from the early and later times. The earliest wave of Semites turned off west of the Caspian Sea and travelled by way of the Kurdistan area to South Mesopotamia.

B. Landsberger (1943-45):⁴ In three minor papers in continuation of Speiser's observations from 1930 (see above, p. 450) a purely linguistic distinction has been made between linguistic material belonging to the Pre-Sumerians (the basic vocabulary regarding farming, gardening, brewing, pottery, leatherwork, building) and the Sumerians (shipping, cattle feeding, jewelry, sculpture, glyptics, land measurements, writing, education, law). According to Landsberger the latter asserts itself in the final period of the Ubaid culture, coming from the sea. E. A. Speiser⁵ has accepted this hypothesis: "[At the] close of the Obeid Period, coincident perhaps with the rise of the Uruk stage, or possibly even as its founders," the population originally consisted of longheads (cf. H. Frankfort's "Arab swamp element" above, p. 420), later "ruled by physically dissimilar invaders (shortheads)," i.e. the Sumerians.

¹ *Gyldendals Verdenshistorie* I (1936; Danish), pp. 42 f.

² *JAOS* Suppl. 4 (1939), pp. 29-31.

³ *Die älteste Geschichte Vorderasiens . . .* (1943), pp. 66 f., and the map p. 64.

⁴ *Ankara Fakültesi Dergisi* I (1943), pp. 97-102; II (1944), pp. 431-38; III (1945), pp. 150-59; quoted from Speiser (see Note 5) and A. Parrot, *Archéologie mésopotamienne* (1953), p. 324⁴⁴, as the publication has been inaccessible to me.

⁵ *The Sumerian Problem Reviewed* (Hebrew Union College Annual XXIII (1950-51), pp. 339-55), p. 355.

A. Moortgat (1945):¹ The arrival of the Sumerians is denoted by the Uruk IV culture, but it seems hazardous to identify the arrival of the Sumerians with the use of a script. The fact that the Sumerian script was first found to occur in the Warka B. period: Uruk IV–III of course proves nothing; it takes time for each people to develop a script and use it.

S. N. Kramer (1946, 1948)² presumably under the influence of H. M. Chadwick's famous *The Heroic Age* (1912) has suggested that in ancient Mesopotamia were Indo-European viking stages. This thrilling development is supposed to have been as follows: (1) Pre-Sumerian times: invaders from Southwest Iran created a peasant-village culture (Uruk XVIII–XVII); then there was an infiltration of Semites from the west (Uruk XVI–XV); an empire arose with an Irano-Semitic government, the "first empire in history" (Uruk XIV–VIII); (2) Sumerian times: from Transcaucasia the Sumerians with pressure upon West Iran invaded South Mesopotamia, where we see three stages: (a) Pre-literate (Uruk VII–VI), the Heroic Age, in which stagnation characterises the culture as a consequence of the shock caused by the Sumerians' invasion; (b) Proto-Literate (Uruk V–III) with invention of writing, pictographic script, painted temple of 'Ukair; (c) Early-literate = Early Dynastic Period. Such fantastic figments do not appeal to me in a scientific connexion, apart from the fact that Kramer only operates with the Ubaid and Uruk cultures, completely leaving the Hassuna and Eridu finds out of the picture.

André Parrot³ (1953), who has especially devoted himself to a thorough investigation of the relation between the Painted Pottery wares of Mesopotamia and those of Iran, as a result has arrived at the firm conviction that the Painted Pottery is of direct or indirect Iranian origin, so that the Uruk ware must present itself to him as an absolute novelty, a break in the chain of development. Parrot imagines the development to have been as follows: A. A connected autochthonous culture from Sialk I by way of Mesopotamia (Jarmo, Matarrah, Hassuna) to the Mediterranean.—B. Two waves of Painted Pottery Iranians from the east: (1) to the Tigris area: Samarra, Halaf;

¹ *Die Entstehung der sumerischen Hochkultur* (1945; *Der Alte Orient* 43).

² *Heroes of Sumer* ... (1946); *AJA* LII (1948), pp. 156–64; already in his *Sumerian Mythology* (1944) it was stated that the country was inhabited by Semites when the Sumerians invaded it.

³ *Archéologie mésopotamienne* II (1953), pp. 328–31.

(2) to the south: Eridu, Ubaid; the latter also to the north.—C. In the Uruk XIV period Red and Grey Pottery appeared; this is the invasion by the Sumerians. They came from Transcaspiya by way of Anau, Bakun A, Susa I, only to South Mesopotamia, for simultaneously with or before the Sumerians, the Semites came to the Diyala-Kish region, while in the north-northeast and on the Upper Tigris the Hurrians (better: Subarians; but Parrot like many others wrongly identifies these) had settled.—D. The Sumerians took the lead in the country during the period Uruk V–IV; a characteristic trait was their aversion to decorating everyday articles for use.

V. Gordon Childe¹ (1954), on the other hand, drew quite another conclusion from the appearance of the Uruk ware: "Since red and grey wares and handled vases were long popular in North Syria and Palestine, the new impulse most likely came from the west or north-west. If immigrants be postulated, the most likely candidates would be Semites."² Childe also interprets the use of stone buildings and a script in the direction of Semites, but admits that the genesis of a script in the Susa C culture cannot be due to Semitic influence. As by Childe above, it is occasionally stated that red and grey wares were Anatolian; but in spite of a study of J. L. Myres'³ works on the pottery, I do not feel convinced that a proof has been given.

As appears from the years indicated, many of the theoretical opinions given have been advanced at a stage when the knowledge we possess today was missing. But on the whole it must be said that even if important observations have been made and significant factors have been pointed out, Parrot is the only one who has tried to make all the great many often disparate mosaic pieces fit into an integral pattern. But before we can decide on Parrot's hypothesis (see pp. 460–62), the other facts mentioned above (p. 449), crania as well as finds of skeletons, and burial methods, must be considered in more detail.

As appears from what precedes, any attempt at connecting Sumerians, Semites, Subarians, or Pre-Sumerians with this or that type of pottery must be guesswork. It is true that the Uruk ware is very conspicuous as a break with the strong concentration of the preceding period on

¹ *New Light on the Most Ancient East* (1954), pp. 124, 131.

² *Ibid.* pp. 123–24.

³ *The Early Pot-Fabrics of Asia Minor* (*Journal of the Anthropological Institute* XXXIII, 1903) and in *Iraq* VI (1939).

the production of Painted Pottery. But if we survey a single site such as Hassuna, we find there changes of pottery which have a character of ruptures with the past without suggesting invasion of foreigners. Or, if we take the polychrome Jemdet Nasr ware from a later period, we also from this period know an undecorated Jemdet Nasr Pottery. Changes in decoration or want of decoration as well as the types of vases and vessels are connected with an artistic urge into which the idea of variation enters, and with experiences aiming at making the kitchenware of more practical use in relation to the civilisatory stage of man. On this background the Uruk ware therefore does not seem revolutionising, but the fact that large-scale monumental building, cylinder seals, and the invention and use of writing just appear in connexion with the appearance of the Uruk ware may excuse the fact that research in previous times as a rule identified the producers of the Uruk ware with the Sumerians, and that Childe identified them with the Semites. A characteristic trait is the investigators' vacillation as regards the time of the arrival of the Sumerians within the Warka culture, evidence of the triumph of guesswork: Jordan: Uruk VI; Moortgat: Uruk IV; Kramer: Uruk VII; and Parrot: Uruk XIV. And finally, if the use of writing is to be the decisive argument, the Sumerians should rather be linked with the last Painted Pottery period in Mesopotamia, which lasted from Warka B. c-d on (see above, p. 425), but this suggestion is not relevant, either.

An investigation of skulls and other parts of skeletons of the prehistoric inhabitants has been made for the purpose of trying to determine racial conditions in support of the argumentation about Sumerians, Semites, Subarians. Unfortunately the material is not very great: finds from Kish, Tell Al 'Ubaid, Ur, Eridu, and extra-Mesopotamian finds from Sialk constitute our slender basis of a discussion. The following facts have been established, to which are added the investigators' comments:

Kish: eight crania; two types: dolichocephalic (the majority) and brachycephalic. From this L. H. Dudley Buxton¹ draws the following conclusion: the brachycephalic Sumerians were overwhelmed by the invasion of dolichocephalic Semites, Kish being the first stronghold of Semitic-speaking people in South Mesopotamia.

Tell Al 'Ubaid and Ur: 17 and 7 items, which on both sites only

¹ See St. Langdon, *Excavations at Kish I* (1924), pp. 115-25.

show characteristic dolichocephaly, so that the same race is shown to occur in the early Ubaid culture and the later one represented by the Royal Cemetery at Ur, according to Sir Arthur Keith,¹ who further declares: "If the Semite and Sumerian regarded themselves as of different races, these differences were probably linguistic and political rather than ethnological."² This shows that Keith as a consequence of the Ur-Ubaid finds considers Sumerians as well as Semites to be dolichocephalic.

Eridu: 15 crania from a cemetery dated at the time of the Ubaid culture, dolichocephalic of the type characteristic of the Mediterranean Semitic race, or in Carleton S. Coon's³ own words: "The population represented by the Eridu cranial sample was Mediterranean, like that of present-day Iraq and its neighbouring countries to east, west and south." The finds from Hassuna, which are very modest, point in the same direction.

Conditions in Sialk⁴ are more complicated and do not concern us directly, as in spite of established but few parallels between prehistoric Iraq and Sialk mentioned above (e.g. p. 420) we have pointed out that the Sialk culture and Mesopotamia can hardly be connected on the basis of the material known to us at present. For information we still adduce the following facts: within the six Sialk cultures 6 crania are known from Period I; 5 from both II and III; 3 from IV; 2 from V; and 18 from VI. Periods V and VI take us far into historic time (12.-11. and 10.-9. cent. B.C.), which does not concern us here. The four earliest Sialk cultures range from early Neolithic to the Proto-literate Period c-d (Jemdet Nasr Period). Dolichocephalic crania are dominant in Sialk I-III; from Periods II-IV we find moderate brachycephaly, which becomes marked hyperbrachycephaly in the later period Sialk VI.

It will be most imprudent to draw far-reaching conclusions from a material of 61 items, 14 of which are extra-Mesopotamian. Introductorily we shall remind of the fact that the race which we know from Upper Aurignacian man as Crô-Magnon shows two different types within parallel implement industries: a dolichocephalic

¹ See *Ur Excavations* I (1927), pp. 214-40; II (1934), pp. 400-09.

² *Ibid.* II (1934), p. 408.

³ *Sumer* V 1 (1949), p. 103.

⁴ See H. Vallols in R. Ghirshman, *Fouilles de Sialk ...* II (1939), pp. 111-92.

eastern or the Předmost type and a more broad-headed western type (Crô-Magnon proper). All that we dare to do is to establish that 47 Mesopotamian items from the earliest periods (Eridu, Hassuna) as well as from Early Dynastic IIIb show a dolichocephalic race and that brachycephaly has been shown to occur in a minority among 8 items only at Kish and from a time within Early Dynastic IIIb. The conclusion which has been drawn on the basis of relief and monumental representations of the Sumerians, that they were brachycephalic, would, if compared with the craniological material mentioned above, mean either that Mackay (see above, p. 453) is right and that the Sumerians did not arrive in Mesopotamia until the Plano-convex Period, for the first brachycephalic crania at Kish have been dated at Early Dynastic IIIb,—or that the Sumerians were not brachycephalic (cf. Keith above, p. 458). The first possibility is refuted by the fact that writing and language are known as Sumerian at any rate from Uruk III on, the other by the sculptural representation of the Sumerians. We cannot get any farther through these craniological studies; thus we cannot, like Parrot,¹ draw the conclusion from the material that as the brachycephalic crania are later, and the Sumerians are brachycephalic, then the Sumerians have come later to Mesopotamia. Only remember the material from Sialk, where the brachycephalic element of the population is also later, dominant in historic time, without it being possible to ascertain the existence of Sumerians there. A race related to the Sumerians, it might be stated; but it must be maintained that as all real evidence (skulls and parts of skeletons) in Mesopotamia as regards brachycephaly only dates from the Early Dynastic Period IIIb, we cannot so far build on anthropological material in any respect.

As to the burial customs within the prehistoric cultures in Mesopotamia there is a possibility that difference between them might give us valuable clues in the direction of changes of population, different races, invasion of peoples from abroad, etc.; for we remember that the historian in his studies of Antiquity often has received valuable assistance from this angle of observation. It should, however, be emphasised that the material is slender, and that especially the very interesting period, the first phase of the Warka culture (A.), is conspicuous by its absence, as practically no graves from this period have been found. A survey looks like this:

¹ *Archéologie mésopotamienne* II (1953), p. 322.

Contracted position:	Hassuna (Early Halaf-Arpachiyah). Proto-literate c-d (Jemdet Nasr Period).
Flexed position:	Hassuna (Middle Halaf-Arpachiyah). Early Dynastic IIIb (Royal Cemetery, Ur).
Extended position:	Ubaid Period.

It will be realised that no certain conclusion can be drawn from this material, as the contracted or the flexed burial customs are known from the earliest (Hassuna) to the latest (Early Dynastic IIIb) Mesopotamian prehistoric time. The rare burial method in an extended position is known only from the Ubaid culture, which thus might be supposed to denote a break in tradition, an invasion from abroad. Extended position is known in eastern cultures by way of Susa A, Shahi-tump in Baluchistan as far as the Harappa culture in the Indus valley, but also in the west among the Natufians of Mount Carmel, while we also from Susa A as well as Harappa know the flexed position as burial method. The characteristic Ubaid burial position thus cannot help us to any information about interrelations between the cultures in the prehistory of the Middle East and I doubt that we may attach any importance to the extended position in the Ubaid culture, considering that from the Natufians we know simultaneously extended as well as contracted position and somewhat later also the flexed position.

It therefore seems to me to be futile to make a synopsis of all the burial customs known, from that of the Tasians in Egypt and along Breasted's "Fertile Crescent" to Harappa in Northwestern India; neither interrelations nor changes of population can be elucidated in this way.

§ 18. As a result of the investigations recorded in this chapter I shall finally formulate my own views.

We have ascertained the existence of three prehistoric cultures, which are comprised under the names of Hassuna, Ubaid, and Warka. As to the first of these, it displays several ceramic periods which perhaps cover cultural phases: in Levels III-VI the "standard" Hassuna ware, in Levels III-VIII (maximum in Level V) supplemented by the Samarra ware, which again is related to the Halaf pottery, which is first seen in Level VI, is dominant in Levels VII-

VIII, and denotes the ceramic culmination of the Hassuna culture. We have no knowledge at all whether its origin and development, in part dependent on the Samarra ware, are due to influence from the Subarians, and the hypothesis should be rejected.

The bearers of the Hassuna culture do not seem originally to have lived much south of Kirkuk, but at some time unknown to us an expansion towards the south took place, their extreme outpost in the south being Eridu. Influence on the Hassuna people there from a Painted Pottery focus at the foothills of the Zagros Mountains characterised the ceramic artistic achievement, so that in the south we find the pottery fabric that we call the Ubaid ware, after which the South Mesopotamian flourishing culture has been named: the Ubaid culture.

The quite different physical conditions in the south, where social solidarity and central administration were required for the water regulation in the alluvial country, in connexion with the absolute lack of raw materials in this landscape, forced the inhabitants of the south country into activities unknown in the north country, where life was easy, amongst other things by virtue of a sufficient rainfall. The result in the south was the sound, industrious period in which even the kitchenware showed its strict Puritanism (the Uruk ware), every nerve being strained at producing an agricultural surplus yield as the basis of barter.

We call this period the Warka culture; it blossomed and set in monumental architecture and the invention of writing, as mentioned above. The Puritan toil was reduced somewhat in the late period (B.), the severe praise of work was supplemented by Painted Pottery again, which was the ancient pottery tradition of Mesopotamia, while other artistic achievements appeared as the result of the cultural surplus. The Warka culture was continued with a markedly Sumerian basic stamp in the Early Dynastic Period as regards race as well as language. From this last prehistoric period we have definite knowledge of Semites and Subarians as inhabitants of Mesopotamia alongside of the Sumerians.

As to the people who can be supposed to be bearers of the three prehistoric cultures, I shall finally make the following statement: the bearers of the Hassuna culture in the north as well as in the southern Eridu had best be named Pre-Sumerians; perhaps they are

the people whose linguistic remnants we find in the non-Sumerian place-names, which mainly occurred in the country south of Baghdad; but perhaps these names are due to Zagros people; for we cannot exclude the possibility (see above p. 420) that the pre-Sumerian Hassuna people in Eridu and others of the settlements in South Mesopotamia were mixed with the producers of the Painted Pottery ware from the foothills of the Zagros Mountains. Such a mixture of population of Pre-Sumerian Hassuna people and Zagros people might be supposed to have resulted in the rise of the Proto-Sumerians of the Ubaid culture, whom we on the basis of the B. Period of the Warka culture are fully justified in naming Sumerians. Thus I consider the Sumerian race the result of a mixture of populations followed by a subsequent isolation from the north, as witness the North Ubaid culture. Such an isolation has in many places in the world been demonstrated to be the surest way to the development of characteristic races and cultures. Thus an immigration, peaceful or warlike, of Sumerians into Mesopotamia at some time is out of the question.

CHAPTER VIII

CHRONOLOGY

During the Second World War when, because of the German invasion of Denmark, I was cut off from following international results in Assyriology, a decisive change took place in the estimation of the Babylonian chronology. This change had its starting point partly in texts from the Royal Archives at Mari and from the Assyrian King List of Khorsabad, partly in observations of a purely archaeological character based on objects found at Tell 'Aṣḥānah, Ras Shamra, and Platanos (Crete), compared with a safe knowledge of the absolute chronology of the XII. Dynasty of Egypt. So far as I can overlook the discussion and its results the situation is now (1955) as follows:

§ I. In 1933–1938 under the leadership of A. Parrot, the French Government carried out excavations at Mari (Tell Ḥariri). The many brilliant results included the discovery of the Record Office of the palace (room no. 115), where the greater part of over 23,000 cuneiform tablets were found, even though others in great number also came to light elsewhere in the palace (nos. 5 and 108). The most productive seasons with regard to these finds of documents were 1935–36 and 1936–37. As early as 1936 Fr. Thureau-Dangin¹ published a letter to Zimri-Lim of Mari from his ambassador, Ibal-pi-el, at the court of Hammurabi of Babylon, and in 1937 Fr. Thureau-Dangin² called attention to an unpublished Mari text by which Ilākabkabu, Šamši-Adad's father, and Yagit-Lim of Mari were proved to be contemporary rulers. In addition, likewise on the basis of unpublished text material, he showed that one of Šamši-Adad's sons, Yasmaḥ-Adad, was ruler of Mari. The next year, 1938, G. Dossin, in *Les archives épistolaires du palais de Mari*,³ issued a number of extracts from letters, transliterated

¹ *RA* XXXIII (1936), pp. 171 f.

² *RA* XXXIV (1937), pp. 135–39.

³ *Syria* XIX (1938), pp. 105–26.

and translated with commentaries. In one of these texts¹ Zimri-Lim is seen to be contemporary with *Ha-am-mu-ra-pi awil Báb-ili^{kl}* and *Ri-im-[^{ll}S]in awil La-ar-sa^{kl}*, and the text may be relatively dated to the time before Hammurabi's 20th year, when Larsa was captured. Dossin's text material further afforded insight into the king list of Mari, which ended with Zimri-Lim; in his 35th year Hammurabi, according to the date lists, captured Mari and destroyed it for ever: [*dug₂ an^den-[lil₂-la₂-la] bad₂ ma-ri₂^{kl} [u₃ bad₂ ma₃-al-gi₄-a^{kl} mu-un-gul-la₂]* "at the call of Anu and Enlil I destroyed the wall of Mari and the wall of Malgû."² Already in his 33rd year he had brought these two city areas under his control,³ a date denoting the fall of Zimri-Lim, since the Mari archives only show 32 regnal years for him. On the basis of this and other experience derived from the Mari archives A. Parrot,⁴ in 1938, established the following correlation between the kings of Assur, Mari, and Babylonia:

Ilushuma		Sumu-ahum
	Ishjup-ilum	
Erishum		Sumu-la-ilum
	Ilum-ishar	
		Zabum
Ilâkabkabu	Yagit-Lim	
		Apil-Sin
Šamši-Adad	Yahdun-Lim	
		Sin-muballiṭ
	Yasmaḥ-Adad	Hammurabi
	(son of Šamši-Adad)	
Ishme-Dagan		
	Zimri-Lim	
	(son of Yahdun-Lim)	

I have omitted Parrot's absolute chronological figures; they were based on the Babylonian chronology posited by Fr. Thureau-Dangin in 1927, in which 2105 B.C. is the first year of Sumu-abum's reign.⁵

¹ *Syria* XIX (1938), pp. 117-18.

² A. Ungnad, *Datentstelen: RLA* 11 (1938), p. 181.

³ Ungnad, *ibid.* p. 180.

⁴ *Syria* XIX (1938), p. 183.

⁵ Cf. Svend Pallis, *Chronology of the Shub-ad Culture* (1941), p. 292; for further details of my work which was ready to go to press on the 4.2.1939, see below pp. 482 f. In the following cited as *Chronology*.

In 1939 the following numbers of regnal years were known for the last Mari sovereigns:¹ Yahdun-Lim 8, Yasmah-Adad 16 + ?, Zimri-Lim 30 + ?. This means that Šamši-Adad's son at any rate must have reigned for 46 years before Hammurabi's 32nd-33rd year when Mari passed under his sway.²

The first to draw a strictly chronological conclusion from the above-mentioned facts was W. F. Albright who showed amongst other things that Šamši-Adad and Hammurabi were contemporaries, some of their regnal years coinciding. In 1921 and 1924 he had made valuable contributions to Assyro-Babylonian chronology.³ In February 1938,⁴ the contemporaneity of Šamši-Adad and Hammurabi demonstrated by the Mari texts was his starting point. The absolute dates are derived from the chronological records of Shalmaneser I and Tukulti-Ninurta I.⁵ The result was: Šamši-Adad about 1880-1860; the first year of Hammurabi's reign about 1870; the I. Babylonian Dynasty about 1970-1670. Albright called his short paper *A Revolution in the Chronology of Ancient Western Asia*, and as such we may designate that re-valuation of the Babylonian chronology which started with the inclusion of the Mari texts. Albright's absolute dating was met with scepticism by Parrot⁶ and Pallis,⁷ whereas one of the most eminent scholars in Babylonian chronology, E. F. Weidner,⁸ in a few lines stated his acceptance of Albright's chronology, his own result being 1977-1678 B.C. for the Amurru Dynasty and 1875-1833 for Hammurabi.

Inspired by Albright's initiative and the Mari texts D. Sidersky⁹ in 1940 published a kind of revised chronology of Albright's new basis. Sidersky's starting point was Thureau-Dangin's paper about Yasmah-Adad from 1937 (see p. 463²), but the contemporaneity of Šamši-Adad and Hammurabi is incompatible with Fotheringham's Venus tablets calculations which put Ammi-zaduga's reign at 1921-1900; Sidersky therefore makes fresh Venus tablets calculations and dates Ammi-zaduga's reign at 1702/1-1682/1, the I. Dynasty at 1950-1650,

¹ Cf. Dossin, *Syria* XX (1939), p. 105.

² Cf. Sidney Smith, *AJA* 49 (1915), p. 18.

³ Cf. Pallis, *Chronology*, p. 278.

⁴ *BASOR* 69 (1938), pp. 18-21.

⁵ Cf. Pallis, *Chronology*, pp. 252-53, 277-79.

⁶ *Syria* XIX (1938), pp. 181.

⁷ *Chronology*, pp. 319-20.

⁸ *AOF* XII (1937-39), p. 188²¹ (this page in the periodical was published in 1938).

⁹ *RA* XXXVII (1940-41), pp. 45-54 (these pages were published in 1940).

and Hammurabi at 1848–1806. Sidersky was hacked up in 1942 by Thureau-Dangin¹ and in 1948 and 1951 by A. Goetze;² concerning the arguments of the two latter see pp. 475–479 below.

§ 2. In four campaigns under the leadership of Sir Leonard Woolley excavations were carried out in Tell 'Aṣḥānak (Alalah) in the period 1936–39; among the tablets found there were about 150 from the time of Hammurabi. In a provisional communication concerning the texts Sidney Smith,³ who seemed to know of Albright's new chronology only through Parrot's above-mentioned criticism, declared that Hammurabi's first year, put at 1860–1850 B.C. "is not only too low (Parrot's words), but may not be low enough."⁴ Thereupon Sidney Smith mentions archaeological materials: the pottery from Tell Brak on the Ḫabur site and 'Aṣḥānah with I. Dynasty tablets at both sites is superseded about 1500 B.C. by another ware, the Nuzu one; white on black or reserved buff on black style. But the period of Ḫabur ware "is not likely to cover an immense space of time"⁵ and probably 'Aṣḥānah's I. Dynasty tablets are not earlier than the first half of the 18th century. "That is a drastic conclusion, for it means that the early kings of the Kassite dynasty, if they were kings at all in any real sense, were in fact contemporary both with each other and with the last kings of the First Dynasty, and that no real Kassite ascendancy was established till the late seventeenth or early sixteenth century. These conclusions will, I imagine, be very unacceptable to many scholars; but there is an historical argument which reinforces the archaeological one. At the time of Hammurabi of Babylon and for about fifty years later the documents from Mari, as yet only partially known, show a state of affairs in Syria incompatible with Egyptian domination. But Egyptian texts, the so-called "Ächtungstexte,"⁶ a large number of which have yet to be published, show that the Twelfth Dynasty of Egypt exercised considerably more control than has been supposed in Syria. If, as is

¹ *La chronologie de la première dynastie babylonienne*, p. 258. (*Mém. de l'Ac. d. Inscr.*, XLIII 2 (1951), pp. 229–58; Thureau-Dangin's paper was written in 1942).

² *JCS* 11 (1948), p. 311 and *BASOR* 122 (1951), pp. 18–25.

³ *AJ* XIX (1939), pp. 38–48.

⁴ *Ibid.*, p. 46.

⁵ *Ibid.*, p. 47.

⁶ No longer dated to the XI. Dynasty as Sethe does, but to the XII. Dynasty, see J. Capart et G. Fossemer, *Comptes rendus de l'Ac. d. Inscr.* 1939, pp. 69 ff.

generally assumed, these texts were written during the nineteenth century B.C., it is most improbable that the documents of the time of the First Dynasty of Babylon also relate to that century.¹

The absolute chronology of the Egyptian XII. Dynasty is based on the Berlin Kahûn Papyrus which L. Borchardt² was the first to call attention to, and on the basis of which he pointed out the Sothic date of Sesostriis III's 7th year within the dates 1876–1872 B.C. The result, the XII. Dynasty 2000–1788, was supported by Eduard Meyer³ and K. Sethe.⁴ Later investigations have given the absolute dates more precisely.⁵ These, based on Edgerton's figures, are as follows:

Amenemhet I	1989 (Wood: 1991)–69
Sesostris I	1969–27
Amenemhet II	1927–1895
Sesostris II	1895–1877
Sesostris III	1876 (Wood: 1879)–38
Amenemhet III	1837–1789 (Borchardt: ⁶ 1795)
Amenemhet IV	1789–79
Sebeknefrure	1779–76 (Borchardt: 1780).

After his brief but exceedingly important suggestions in 1939, Sidney Smith in 1940 issued a paper of 52 pages, *Alalakh and Chronology*, into which arguments derived from the Mari texts, the excavation results from Tell 'Ajjshânah, and the relation to Syria-Egypt, enter as the solid foundation. While all earlier tentative chronologies since 1884, when Th. G. Pinches presented the first regnal year of Sumu-abum: 2232 B.C.,⁷ rest on a computation of numbers alone, in addition, after 1912 (Fr. X. Kugler), often supported by astronomical calculations, Sidney Smith was the first to put forward purely archaeological material as aids to chronological determinations.

¹ Sidney Smith, *AJ* XIX (1939), p. 47.

² *ZAS* XXXVI (1899), pp. 89 ff.

³ *Ägyptische Chronologie* (1904 and 1907; *Abh. d. Kön. Preuss. Akad. d. Wiss. z. Berlin* 1904 and 1907).

⁴ *Untersuchungen z. Gesch. u. All. Ägyptens* III (1905).

⁵ W. F. Edgerton, *JNES* I (1942), pp. 307–14; Lynn H. Wood, *BASOR* 99 (1945), pp. 5–7.

⁶ *Die Mittel zur zeitlichen Festlegung von Punkten der ägyptischen Chronologie* (1935).

⁷ About the whole historical development of the research on the Mesopotamian chronology, see Palilis, *Chronology*, pp. 235–428.

The Habur Pottery, found in levels VII and VI of Tell 'Ašhānah, is replaced in level V by the Nuzu ware; a comparison with the same change of pottery partly on the Habur site itself (Chagar Bazar, Tell Brak) partly in the Mosul area (Tell Billah) gives relative dates, cuneiform tablets from the I. Babylonian Dynasty being found in the building levels containing Habur Pottery. Further, finds at Ras Shamra of cylinder seals and other objects from the age of Hammurabi show that these can be relatively dated to the 18th-17th centuries on the basis of the pottery and scarabs. "Il n'est pas impossible qu'ils soient postérieurs même à la couche dans laquelle gisaient les fragments de sphinx d'Amenemhet III."¹ Above we saw that Amenemhet's absolute dates were 1837-1789. To this must be added Sidney Smith's own argument from 1939 that Hammurabi's western conquests (amongst others the taking of Mari) imply that the XII. Egyptian Dynasty was rapidly declining and had lost control of Syria. Finally Sidney Smith calls attention to the date formula for the 9th year of Samsu-iluna: *ugnim ka-aš-šu-u₂* "the Kassite army,"² and this information is interpreted as follows: just as it was shown in 1907 by L. W. King's investigations that the II. Babylonian Dynasty held sway in southern Mesopotamia contemporaneously with the period of Samsu-iluna of the I. Dynasty to Agum of the III. Dynasty,³ thus also we must surmise that the III. Dynasty rulers at first reigned contemporaneously with the kings of the I. and II. Dynasties, and that the period of about 576 years, which King List A ascribes to the Kassite Dynasty, has as its first year the 9th year of Samsu-iluna.

In his attempt to arrive at absolute figures Sidney Smith turns to the Venus observations from Ammi-zaduga's reign.⁴ The astronomical possibilities of which Kugler (1912, 1922, 1924) and Fotheringham (1923, 1928) had taken account were based on the view then prevalent, and derived exclusively from the evidence of the texts, that the first year of the I. Dynasty must fall somewhere between 2200 and 2000. Taking into consideration the above-mentioned observations, as Sidney Smith had done, where the only absolute date that presented itself

¹ Cf. F. A. Schaeffer, *Ugaritica* I (1939), p. 18¹.

² A. Ungnad, *Datenlisten: RLA* II (1938), p. 183. Cf. also Barbara E. Morgan, *Dated Texts and Date-Formulas of some First Dynasty Kings* (1953; *Manchester Cuneiform Studies* 3) and F. R. Steele, *BASOR* 122 (1951), pp. 45-49.

³ Cf. Pallis, *Chronology*, pp. 256 f.

⁴ In detail see *Chronology*, pp. 267 ff.

was the probability that Hanûmurabi had reigned after Amenemhet III who died in 1789, it was a matter of course that the astronomical possibilities would be quite different. By the aid of J. W. S. Sewell's calculations it was established that Fotheringham's first year for Ammi-zaduga, 1920 B.C. and the year 1645 B.C. were on a level: "However that may be, all the arguments adduced in *The Venus Tablets* (i. e. Langdon and Fotheringham's work from 1928) in support of the sequence of conjunctions beginning Adar 1920 B.C. apply equally to the sequence beginning Adar-1644 (1645 B.C.)".¹ After this Sidney Smith could then posit the following list of the I. Dynasty:

"Sumu-ahu	14 years	1894-1881
Sumu-la-el	36 -	1880-1845
Šabum	14 -	1844-1831
Apil-Sin	18 -	1830-1813
Sin-muballiṭ	20 -	1812-1793
Khammurabi	43 -	1792-1750
Samsu-iluna	38 -	1749-1712
Abi-eshu	28 -	1711-1684
Amni-ditana	37 -	1683-1647
Ammi-zaduga	21 -	1646-1626
Samsu-ditana	31(?) -	1625-1595". ²

The sacking of Babylon by the Hittites just after 1600 agrees better with what we know of archaeological material from Anatolia. The regnal period of the Kassite Dynasty, 576 years, will then, according to the new dates given above for the I. Dynasty, be 1740-1165. The last year will then according to the new figures coincide with the figure at which I arrived³ in 1936-38, and which has proved to be a safe point of departure for the whole of the succeeding period. This, in my opinion, is another point in favour of the correctness of Sidney Smith's new chronology for the I. Dynasty.

Sidney Smith's *Alalakh and Chronology* is dated April 1, 1940. W. F. Albright was therefore independent of this but not of Smith's very important above-mentioned observations from 1939, when in

¹ J. W. S. Sewell in Sidney Smith, *Alalakh and Chronology* (1940), p. 27.

² *Alalakh and Chronology* (1940), p. 29.

³ See *Chronology*, p. 324.

February 1940¹ he revised his chronology from February 1938, to the effect that the I. Dynasty was from about 1900–1600, and Hammurabi's first year about 1800. All Albright's dates are round numbers and are not supported by the astronomical Venus tablets, but it is a fact that the arguments he adduces are in great part identical with those of Sidney Smith viz. pottery evidence from Mallowan's Habur excavations in Chagar Bazar and Tell Brak, as well as "the stratigraphic situation of Alalakh, so far as can be gathered from Woolley's provisional reports",² the Mari archives, the dating of the XII. Egyptian Dynasty, and the record of Amenemhet III as the last powerful king. But Sidney Smith's paper is by far the most detailed, based on his intimate knowledge of the whole chronological material, and to this must be added that the Venus observations give strength to the precise dates, in contrast with which Albright in his 5 pages merely makes his points by the enumeration of arguments. But both these eminent scholars have taken the right view and the same view, though as regards the Kassite Dynasty, which Albright supposes came into power about 1615–1600 B.C., Sidney Smith alone has seen the problem and its possible solution.

Arthur Ungnad, who since 1907 had occasionally made valuable contributions to the Babylonian chronology³, had by one of his publications induced Father Fr. X. Kugler to revise his sole prevailing chronology.⁴ When he published his chronological studies in 1940, he was of course acquainted with the evidence of the Mari texts and with Sidney Smith's relative chronological results from 1939. Albright's lowering of the dates of the Amurru Dynasty only seem known to him through Weidner's above-mentioned acceptance of it. After a first provisional communication in 1940, in which Ungnad⁵ gives considerably lower figures than Albright, he published a treatise in the same year entitled *Die Venus Tafeln und das neunte Jahr Samsuilunas (1741 v. Chr.)*,⁶ in which the starting points for his chronological revision are partly the new Venus tablets calculations, partly the

¹ BASOR 77 (1940), pp. 25–30.

² *Ibid.* pp. 28–29.

³ Cf. Pallis, *Chronology*, pp. 256 ff.

⁴ *Ibid.* pp. 282–84.

⁵ AOF XIII (1939–41), pp. 145–46 (these pages in the periodical were published in 1940): I. Dyn. 1903–1604, Hammurabi 1801–1759.

⁶ MAOG XIII 3 (1940).

hypothesis that the first year of the Kassite Dynasty coincides with Samsu-iluna's ninth year. The result of Ungnad's computations was: the I. Dynasty 1893–1594, Hammurabi 1791–1749, dates which are independent of, but identical with, those of Sidney Smith, because they are based on the same arguments. In his last chronological publication from 1944 Ungnad¹ maintained these points of view in spite of the evidence of the Khorsabad King List communicated by A. Poebel,² though with a certain deference also to Sidersky's (Fr. Thureau-Dangin's) arguments and figures.³

Acquainted with Sidney Smith's as well as Albright's new, almost identical chronologies from 1940, an authority like O. Neugebauer the year after put in a word for the dating of the I. Dynasty at 1900–1600.⁴ Neugebauer's arguments in favour of Smith-Albright's views are as follows: (1) Assyrian chronology gives us about 1820 ± 40 for Šamši-Adad's rule; (2) lack of reference to Egypt in the Mari correspondence; (3) evidence from Ras Shamra; (4) according to his own calculations from the Venus observations at the time of Ammi-zaduga, one of the dates of Hammurabi's accession would be as follows: 1856, 1848, 1797, 1736 and perhaps a few more dates in between.

§ 3. The excavations of the Oriental Institute of the University of Chicago at Khorsabad in the season 1932–33 brought to light the so-called Assyrian King List from Khorsabad.⁵ This highly important text is a copy from an original which according to Rev. II 33 comes from Assur, a statement confirmed by a comparison with the king list derived from Assur, at Constantinople, C. 8836. This text, which was published in 1927 by Essad Nassouhi,⁶ has proved to be a duplicate of the Khorsabad List, since C. 8836 Obv. I 34–43; Obv. II 16–43; Rev. I 9–46; Rev. II 1–28 are identical with the Khorsabad List Obv. I 34–47; Obv. III 20–47; Rev. I 5–34; Rev. I 35–II 13. The Khorsabad List, which may be a guide to us and perhaps eke out our knowledge

¹ *Orientalia* N. S. 13 (1944), pp. 83–86.

² See below § 3.

³ See below § 4.

⁴ *JAOS* 61 (1941), pp. 58–61.

⁵ H. Frankfort, *Iraq Excavations of the Oriental Institute 1932–33* (1934), pp. 87–88 (*OIC* No. 17); G. Loud and Ch. B. Altman, *Khorsabad* II (1938), p. 60, cf. Th. Jacobsen, *The Sumerian King List* (1939), p. 194¹².

⁶ *AOF* IV (1927), pp. 1–11, with a commentary and a new Assyrian chronological king list by E. F. Weidner, *ibid*, pp. 11–17, see also Palls, *Chronology*, pp. 279, 316.

of Assyrian chronology, has not yet been published,¹ so that the circle of Assyriologists who have special knowledge of and interest in chronology are not able to give their independent views of the problems elucidated or presented by the List. What is available so far from the hand of Arno Poebel is not a text edition or a transcription, but this scholar's review from 1942-43, of the contents of the Khorsabad List, his own comments on it, and the conclusions he can draw from it.² Poebel's paper was supplemented in 1944 by E. F. Weidner's complete transcription of the reverse of the Khorsabad List³ based on a photocopy of it which was taken from *The Sphere* of 7th April 1934. Poebel's paper is most interesting, written as it is by a highly esteemed Assyriologist of profound learning, but if the rest of us had the text itself and could compare it with Poebel's comments and explanations we should perhaps be able to praise his acumen still more. As it is, no responsible chronologist can venture to use the Khorsabad List as a conclusive argument in dubious cases.

On the basis of the statements of the Khorsabad List itself Poebel puts the date of Šamši-Adad's accession at $1726 + X$, without our being able to verify this date. In order to determine the magnitude of the quantity X Poebel has to resort to the Assyrian chronological traditions of Sialmaneser I, Tukulti-Ninurta I, and Esarhaddon. These traditions, as I have shown,⁴ are irreconcilable. By manipulation of the figures, by which the famous $720 < 780$ years of Tukulti-Ninurta I are reduced to 620, X is reduced to 0, and Šamši-Adad's reign of 33 years is then established by Poebel to comprise the period 1726/25-1694/93, a date which E. F. Weidner⁵ claimed that he could determine more precisely as 1729-1697.

Under the impression of Poebel's report of the contents of the Khorsabad List and of his above-mentioned dates for the reign of Šamši-Adad, W. F. Albright for the third time since 1938, revised his chronology of the Hammurabi Dynasty in December 1942 in *A third Revision of the*

¹ The Oriental Institute, Chicago, has published photo-copies of the obverse of the Khorsabad List, not practical for purposes of study (J. H. Breasted, *The Oriental Institute* (1935), p. 56 fig. 49 and G. Loud and Ch. B. Altman, *Khorsabad* II (1938), Pl. 57 No. 74). Not until 1954 were excellent photo-copies published by I. J. Gelb, *JNES* XIII (1954).

² *JNES* I (1942), pp. 247-306, 460-92; II (1943), pp. 56-90.

³ *AOF* XIV (1941-44), pp. 363-65 (these pages in the periodical were published in 1944).

⁴ *Chronology*, pp. 344 f.

⁵ *AOF* XIV (1941-44), p. 368 (this page in the periodical was published in 1944).

*Early Chronology of Western Asia.*¹ Albright accepts Poebel's conclusions from the Khorsabad List as far as Assyria is concerned, though he computes the total of regnal years of Aššur-rabi I and Aššur-nâdin-aḫḫē I at 22 years where Poebel has 0. Hence Albright has all kings preceding these two 22 years earlier than Poebel, and so according to Albright the accession of Šamši-Adad falls in the year $1726 + 22 = 1748$ B.C. As far as Babylonia is concerned Albright argues as follows: the first year of Hammurabi must, according to the Assyrian calculations, be assigned to a later date than Sidney Smith's and his own date from 1940, since Šamši-Adad reigns for 33 years and according to the Mari texts was still alive in Hammurabi's 10th year. In order to arrive at absolute figures Albright then avails himself of the Venus observations as Smith had done in 1940. "To obtain still later dates by the Venus Tablets we must descend 275 years below each of Fotheringham's five alternative dates (or 64 years after Sidney Smith's most recent date), and must place Hammurabi 1728-1686 B.C."² or the I. Dynasty about 1830-1530. Albright's use of the Venus cyclis is fully justifiable, as was emphasised above when we discussed O. Neugebauer's paper of 1941.

The same year, but before December 1942 when Albright published his third chronology of the Amurru Dynasty, and therefore independently of this scholar, Fr. Cornelius³ proposed exactly the same dating: I. Dynasty 1830-1531; Hammurabi 1728-1686. While Albright in all essentials derived support from the Khorsabad List, Cornelius does not allude once to the List. Nor did the Mari texts enter into Cornelius' reasoning which was based on a thorough investigation of the Berossus tradition⁴ supplemented by Ungnad's fresh calculations from 1940⁵ of Ammi-zaduga's Venus tablets.⁶

Finally, in the period 1944-1948 three scholars proposed other chronological figures for Hammurabi's regnal years which all denote a further lowering of dates. All three base their arguments in all essentials on the Khorsabad List and at the same time take account in their lists of the evidence of the Mari texts concerning the partial

¹ *BASOR* 88 (1942), pp. 28-33.

² *BASOR* 88 (1942), pp. 30-31.

³ *Klio* N. F. XVII (1942), pp. 7, 12.

⁴ Cf. Pallas, *Chronology*, pp. 240-42.

⁵ See above pp. 470-71.

⁶ Cf. Pallas, *Chronology*, pp. 286 ff., 296 ff.

contemporaneity of Šamši-Adad I and Hammurabi. F. M. Th. Boehl takes as his fixed starting point in 1944¹ Weidner's dates for Šamši-Adad I: 1729–1697, in 1946² Poebel's 1726–1694, and arguing from the conclusion, consistent in itself, that Albright's Hammurabi figures (1728–1686) cannot, therefore, be correct, since the two kings would in that case be direct contemporaries, he lowers Hammurabi's figures to 1701–1659, in 1946 to 1704–1662.—In 1947 P. Van der Meer³ supposes that Šamši-Adad I in the first year of his reign captured Mari, or in the year 1726 + X according to Poebel, and retained control for sixteen years, i. e. until 1711 + X, and that Zimri-Lim took Mari by defeating Šamši-Adad I. As this happened in the second year of Hammurabi the latter then reigns from 1712 + X to 1670 + X. But P. Van der Meer ignores all possible use of the Venus tablets of Ammi-zaduga and also Sidney Smith's statement: "that Assyrian years can be equated with Julian years is probably an error."—Finally K. Schubert⁴ in 1948, in continuation of Boehl's considerations accompanied by various computations and other arguments claimed that he could establish Hammurabi's regnal years as 1704–1662, figures that are identical with those of Boehl from 1946.

§ 4. The three latter tentative chronologies, advanced by Boehl, P. Van der Meer, and Schubert, cannot be accepted, a correct conclusion being drawn only from a quite uncertain absolute figure, Šamši-Adad I's accession in the year 1726 + X (Poebel), 1726 (Albright), 1729 (Weidner) or from the unproved contention that Šamši-Adad I captured Mari in the year 1726 + X. We have therefore in what follows ignored the arguments of these scholars. There remain for our consideration the following three datings of Hammurabi's regnal years:

Sidersky	(1940) : 1848–1806
S. Smith (-Ungnad)	(1940) : 1792–1750 (1791–1749)
Albright-Cornelius	(1942) : 1728–1686.

¹ *Bibliotheca Orientalis* 1 (1944), pp. 102–03.

² *King Hammurabi of Babylon in the setting of his time (about 1700 B.C.)* (1946; *Mededeelingen der Koninklijke Nederlandsche Akademie van Wetenschappen. Afd. Letterkunde N. R.* IX 10).

³ *The Ancient Chronology of Western Asia and Egypt* (1947), p. 22 (*Documenta et Monumenta Orientis Antiqui* II).

⁴ *WZKM* 51 (1948), pp. 21–33.

The revolutionising lowering of the regnal years of the Amurru Dynasty naturally excited great and needful interest among all Assyriologists and archaeologists of Western Asia. Sidney Smith's, Ungnad's and Albright-Cornelius's theories have gained the greatest number of adherents. Among the followers of Sidney Smith we find the names of the most eminent archaeologists of our day, while Albright's supporters are mostly the scholars who rely on the Khorsabad List; only two opinions have favoured Sidersky's chronological solution. Sidney Smith's chronology is supported by B. Hrozný,¹ M. E. L. Mallowan,² T. Burton Brown,³ Claude F. A. Schaeffer,⁴ André Parrot⁵ and Sir Leonard Woolley,⁶ while among Albright's adherents we find E. F. Weidner,⁷ Ignace J. Gelb,⁸ E. Cavaignac,⁹ M. B. Rowton,¹⁰ G. Goossens,¹¹ W. v. Soden,¹² R. T. O'Callaghan,¹³ B. L. Van der Waerden,¹⁴ M. Rutten,¹⁵ and G. Contenau.¹⁶

While none of the above-mentioned scholars have contributed essentially to lay the foundation for the chronological results they support, Fr. Thureau-Dangin and A. Goetze who are both most inclined to support Sidersky's chronology, have put forward suggestions which cannot be ignored, both turning their attention to Sidney Smith's surmise of the synchronisation of the Kassite Dynasty with that of Amurru.

When in 1942 Thureau-Dangin wrote his paper on *La chronologie de la première dynastie babylonienne*,¹⁷ only Sidersky's and Smith-

¹ *Die älteste Geschichte Vorderasiens* (1943), p. 97.

² *Iraq* IX (1947), p. 4.

³ *Excavations in Azarbaljan, 1948* (1951), pp. 90-91.

⁴ *Stratigraphie Comparée et Chronologie de l'Asie Occidentale* ... (1948), pp. 29-33.

⁵ *Archéologie mésopotamienne* II (1953), pp. 432 ff.

⁶ *A Forgotten Kingdom* ... (1953), p. 66¹.

⁷ *AOF* XIV (1941-44), pp. 362-69 (these pages in the periodical were printed in 1941).

⁸ *Hurrians and Subarians* (1944), pp. VI, 42.

⁹ *RA* XL (1945-46), pp. 21-22 (printed in 1945).

¹⁰ *Iraq* VIII (1946), pp. 106 f., 110; *JNES* X (1951), pp. 184-201.

¹¹ *Le Muséon* LXI (1948), pp. 1-29.

¹² *Die Welt des Orients* 1948, p. 190.

¹³ *Analecta Orientalia* 26 (1948), pp. 6-10.

¹⁴ *Jaarbericht van het vooraziatisch-egyptisch Genootschap Ex Oriente Lux*, Deel III Nos. 9-10, 1941-48 (1952), pp. 414-24 (printed in 1948).

¹⁵ *Mémoires de la Mission archéologique en Iran* XXXI: *Mission de Susiane* (1949), p. 166.

¹⁶ *La civilisation d'Assur et de Babylone* (1951), pp. 59 f., 331.

¹⁷ See above p. 466¹.

Ungnad's chronologies had been published, all dating from 1940. Thureau-Dangin points out that the absolute dates obtained from Ammi-zaduga's Venus tablets are no conclusive evidence since there are many possibilities here.¹ Smith-Ungnad's starting point is Samsu-iluna's 9th year, but Sidersky's chronology, 56 years higher, is equally justifiable in absolute figures. Of decisive importance is, according to Thureau-Dangin whose arguments are given below, the relation of the Kassites to the I. Dynasty. From this, according to the Assyrian tradition in Sennacherib's Bavian inscription,² the initial year of the Kassite Dynasty is computed as follows: 689 (the destruction of Babylon) + 418 years (distance in time between Sennacherib and Marduk-nâdin-aḥḫē) = 1107, and Marduk-nâdin-aḥḫē's first year 1116 + 43 + X (according to King List A) = 1159 + 576 (the period of the Kassite Dynasty) = 1735; this date is reduced by means of Th. Jacobsen's information in 1939³ concerning the Khorsabad List to 1729, 1159 becoming 1153. If the year 1729 denotes the year of the overthrowing of the Amurru Dynasty with the taking of Babylon, by Gandash (Gandush, Gandish), the first Kassite king,⁴ then both chronologies, Sidersky's and Smith-Ungnad's are quite untenable; but the textual foundation for the conquest of Babylon is uncertain: in 84-2-11,178 Gandash is mentioned as king of EŠ. EŠ. LAM.⁵ According to Sidersky's chronology the year 1729 is Ammi-ditana's 11th year. With this may be compared the fact that an unpublished text from the time of Abi-esu,⁶ his predecessor, perhaps mentions that the latter has driven away "the Kassite army": *ugnim ka-aš-su-u₂*. From this it is inferred that the Kassites "ont pu prendre pied en Babylonie vers la fin du règne d'Abi-ešuh".⁷ What Thureau-Dangin meant by this, particularly in connection with 1729 as the 11th year of Ammi-ditana, remains uncertain, for if the Kassites begin to rule as a dynasty in Ammi-ditana's 11th year, then the parallelism of the two dynasties has been established. This idea is dismissed in the last part of Thureau-

¹ Thus also emphasised by O. Neugebauer in 1941, see above p. 471.

² III R 14.

³ See above p. 471^b.

⁴ See H. Winckler, *Untersuchungen zur altorientalischen Geschichte* (1889), pp. 34, 156.

⁵ Cf. Th. G. Pinches, *BOR* I (1886-87), pp. 54, 78; L. W. Kling, *Chronicles ...* I (1907), p. 103¹; and Sidney Smith, *Alalakh and Chronology* (1940), pp. 21 f.

⁶ Cf. C. H. W. Johns, *PSBA* XXXII (1910), pp. 275, cp. also A. Ungnad, *Datenlisten: RLA* II (1938), p. 185.

⁷ *Mém. de l'Ac. d. Inscr.* XLIII 2 (1951), p. 254.

Dangin's paper, since such a parallelism is not confirmed anywhere else,¹ and at the beginning² it is strongly emphasised that the Kassites are not referred to during Samsu-iluna's reign; they are not mentioned until the last (37th) year of Ammi-ditana and under Ammi-zaduga, says Thureau-Dangin, referring to Ungnad's Dilbat texts.³ Therefore Smith-Ungnad's chronology is rejected, while Sidersky's is considered "possible".

Thureau-Dangin's arguments cannot be accepted. In the above we have pointed out contradictory arguments in his considerations and we may further mention the following points: (1) the synchronisation of dynasties which were previously thought successive has been established for the Babylonian Dynasties I and II since L. W. King's investigations in 1907⁴ but, like the synchronisation of e.g. Gutium and Ur III; Erech V and Ur III⁵ it rests on an exceedingly slender text material, though it is, nevertheless, accepted. And even though the parallelism of the I. and III. Babylonian Dynasties is based on a similar limited text material, this should also be respected until new evidence refutes it. (2) if thus the synchronisation of the Hammurabi and the Kassite Dynasties is a provisional chronological result, we miss in Thureau-Dangin's considerations grounds for ignoring the date formula for Samsu-iluna's 9th year in favour of an almost identical date formula from an uncertain year in Abi-eshu's reign. (3) Thureau-Dangin's absolute year, 1729, as the initial year of the Kassite Dynasty corresponds in Sidney Smith's chronology to Samsu-iluna's 20th year, in Sidersky's to Ammi-ditana's 11th year, but we have no evidence whatever either of the first appearance of the Kassites in Babylonia, or of their actual assumption of the power there, as regards the very reigns of the two above-mentioned kings; on the other hand, as we have already stated, the Kassite army is mentioned in the date formulas for Samsu-iluna's 9th year and from an uncertain year of Abi-eshu's reign. From this we must draw the conclusion that as regards the date 1729 either we cannot rely on the Assyrian tradition in Sennacherib's Bavian inscription or on the interpretation of the Assyriologists of this information; the difference between 1729 and the figure which in my

¹ *Ibid.* p. 258.

² *Ibid.* pp. 236-50.

³ ... *Urkunden aus Dilbat* ... (1909), pp. 23, 21 (*BA* VI 5).

⁴ See above p. 468 and Pallis, *Chronology*, pp. 254 ff.

⁵ See Pallis, *Chronology*, pp. 360-61, 434.

opinion is correct: 1740,¹ is 11 years. And if 1729 were to denote the 9th year of Samsu-iluna, when the Kassites are mentioned for the first time, Ammi-zaduga's 2nd year would not be compatible with the information of the Venus tablets, and neither Sidersky's nor Sidney Smith's chronological figures would be correct.

In a review in 1948 A. Goetze² sharply criticises the reliance placed on the Khorsabad List. He says: "It is uncritical and therefore risky to adopt the figures of the Khorsabad kinglist as the historical truth. They merely represent the version of the late Assyrian historiographers which differs even from older Assyrian tradition. For the establishment of a trustworthy chronology the synchronisation of the Kassite dynasty with that of Amurru remains still the crucial issue. I cannot find that the arguments of Thureau-Dangin in his last contribution to Assyriology (*Mémoires de l'Acad. des Inscr.* 43/2 1942) have been invalidated by the new kinglist; they should not have been disregarded."³ From the above it will be seen that I do not share Goetze's reverence for Thureau-Dangin's chronological views, whereas I can fully accept Goetze's comments on the Khorsabad List.

In 1951 Goetze attempted to solve the problem as to which of the posited new chronologies for the Hammurabi Dynasty was the most probable, by including in the discussion a study of the earlier history of the Hittites in a paper entitled *The Problem of Chronology and Early Hittite History*.⁴ In this paper Goetze rejects the tentative chronologies put forward by Albright-Cornelius and Boehl-Schubert so as to be able, by a computation of the figures for the probable total regnal years of 9 Hittite kings, to choose between Sidersky's and Smith-Ungnad's chronologies. His argument is as follows. About 1450 comes the renaissance of Hittite power under the predecessors of Šuppiluliumaš. Muršiliš captures Babylon in 1650 (Sidersky) or 1595 (Smith-Ungnad). We know of 9 Hittite kings between Muršiliš, and Šuppiluliumaš' predecessors: "the nine kings in question represent 5 + X, most likely 7 generations. In terms of years this should mean a period of roughly 200 years".⁵ $1450 + 200 = 1650$ or Sidersky's above-mentioned year for the taking of Babylon by Muršiliš, which Thureau-Dangin in 1942 gave as a "possible" chronology.

¹ See above p. 469.

² *JCS* II (1948), pp. 309-14.

³ *Ibid.* p. 311.

⁴ *BASOR* 122 (1951), pp. 18-25.

⁵ *Ibid.* p. 23.

But Goetze's way is an impasse. (1) it is true that we know about two (Ḫantiliš, Telipinuš) of the 9 Hittite kings that they reigned for some length of time, but about two of them we know absolutely nothing, about another two we know that they were murdered. In Denmark 8 kings reigned from 1746 to 1947, but the figure 200 years seems to me too high when we think of the troubled dynastic conditions in Western Asia around the middle of the 2nd millennium. (2) computations of generations seem difficult to employ in the case of such an alien milieu, but in any case a generation does not cover the reign of a king. (3) Goetze himself ultimately admits that Smith-Ungnad's chronology is "barely possible," even though that of Sidersky "remains preferable".¹

In 1953 Eckhard Unger² published a revision of Hammurabi's first year which as regards the absolute dates is similar to that of Sidersky, Thureau-Dangin, and Goetze mentioned above. Unger's argument is based on a train of thought which reminds one much of Goetze's and which, too, I can only consider an impasse. Unger's starting point is the fact that the Khorsahad List from the 8. century in IV 5-11 mentions 8 kings without giving the number of years their reigns lasted. This, according to Unger, corresponds to $8 \times 15-19$ years = 120-152 years, by which number of years Albright's dates for Hammurabi, 1728-1686, must be increased, especially because the older Assyrian kings' original accounts from the 13.-12. century show a minus from 119 to 159 years. But a revision of the Hammurabi chronology based exclusively on the conjectural duration of the reigns of 9 Hittite kings (Goetze) or 8 Assyrian kings (Unger) can only result in a loose estimate, not in a chronology.

§ 5. Thus two chronologies remain: those of Sidney Smith and Albright, and as pointed out above on p. 475, it is on one of these two tentative solutions that scholars have concentrated their interest. As regards these two researchers, to both of whom falls the credit of having revolutionised the chronology of Western Asia, Albright has in a brief notice³ of Sidney Smith's work of 1940, or in a few lines,⁴ maintained his date for Hammurabi: 1728-1686, with a special

¹ *Ibid.* p. 25.

² *Sumer* 1X 2 (1953).

³ *AJA* 47 (1943), pp. 491-92.

⁴ *BASOR* 99 (1945), p. 10.

reference to the Khorsabad List. Sidney Smith, on the other hand, in a longer treatise, *Middle Minoan I-II and Babylonian Chronology*,¹ besides adding fresh archaeological material (e. g. the finds in Tholos B at Platanos, Crete, of Babylonian seals from the I. Dynasty, and Egyptian scarabs; finds of similar Babylonian cylinder seals from Ras Shamra) has given his opinion of what we know of the Khorsabad List from Poebel's provisional report.

What a scholar of Sidney Smith's rank here puts forward is of tremendous weight. On the basis of the Assyrian chronological tradition he says: "the principal documents all point to a date about 1812/1-1790/89 [misprint for 1780/79] for this 33-year reign (i. e. Šamši-Adad's). The only statement at present known not reconcilable with the dating is that of Esarhaddon. This conclusion would accord with the evidence from Ras Shamra and 'Aṣṣḥānah, which does not permit of any long interval between the end of the reign of Amenemhet III and the reign of Hammurabi. If it is argued that the archaeological material is inferior in historical value to the Khorsabad list, there are two answers which it is important to state firmly. The first is, that the Khorsabad list, so far as the contents have yet been communicated, is not against the date 1812/1-1780/79 B.C. for Šamši-Adad I; what is against the dating is an interpretation which forces that list into agreement with the possibly erroneous copy of an inscription of Esarhaddon. The second answer must be that, even if the figures in the Assyrian king list gave a total number of years that conflicted absolutely with the dating, the value of the other evidence is not affected and must be taken into account. It is idle to base absolute chronology on mere jugglery with figures. The task is to use manifold evidence . . ."²

In appraising the archaeological material we must call to mind that as regards the period in absolute figures: 1750-1350, M. E. L. Malloy³ says: "a margin of error of at least a century must often be admitted in the archaeological record," and that Schaeffer's dating of Ugarit-Moyen 2 and the absolute dating for the end of the Middle Minoan Ia are still problems open to discussion. But with this reservation as regards parts of Sidney Smith's argumentation of 1945 we must explicitly declare that Woolley's as well as Schaeffer's archaeolo-

¹ *AJA* 49 (1945), pp. 1-21.

² *AJA* 49 (1945), p. 23.

³ *Iraq* IX (1947), p. 4.

gical results at Tell 'Aṣḥānah and Ras
 Sidney Smith's chronology. Albright's
 based on Poebel's interpretation of the
 regarded as one-sided and doubtful, (conf
 above-quoted estimations of the Khorsā
 solute figures may be supported by a V

§ 6. In 1954 Benno Landsberger pu
Assyrische Königsliste und "dunkles Zeite
 lished exceedingly acute and most imp
 which indisputably place him as the
 American Continent in our time, the eq
 and Sidney Smith in modern European
 the above-mentioned paper, which in
 Hittites, Kassites, and Mitanni in the di
 the greatest attention, and likewise beca
 ports M. E. L. Mallowan's above-menti
 absolute dates by about a century.

Arrived at the end of the road, Lan
 decessors, rejects Albright's chronology
 Sidney Smith's "gut möglich" and Goe
 the centre of gravity in Landsberger's
 the suggested revisions of the Hammurabi
 of the possibility of arriving at any abs
 basis of the material we possess. "Wir c
 'Chronologie' zu bieten. Und wer verm
 wissen, dies tun zu können? Eine o
 scheint die Zahl 1700 (oder nahe davon
 d. i. 1900 (oder nahe davon) für Hamm
 A close study of Landsberger's argume
 incontestable Hammurabi chronology
 different dates for Hammurabi's first ye
 by astute and conscientious scholars si
 the Mari archives in 1938 ff., plainly a

A scholar of such high rank as Ben

¹ JCS VIII (1954), pp. 31-45, 47-73, 106-133

² *Ibid.* p. 115.

³ *Ibid.* p. 120.

hamra, respectively, support figures from 1942, which are Khorsabad List, must be re-Sidney Smith's and Goetze's d List), even though the ab-us cycle.

ished a chronological paper er".¹ This scholar has pub-stant linguistic investigations greatest Assyriologist of the of the late Antonius Deimel search. For that very reason ades all our knowledge of ussion, should be read with se Landsberger's result sup-ed tentative raising of the

berger, considering his pre-s "zu kurz," while he calls e's "nicht unmöglich".² But per is not the evaluation of chronology, but his rejection ute chronology at all on the lären uns ausserstande, eine se sich heute mit gutem Ge-ective Prüfung der Quellen ür das Ende Samsu-ditanas, abi 1, zu befürworten . . ."³ s has convinced me that no can be posited; the many - which have been suggested e the publication of part of est this.

Landsberger has a natural

claim to be heard with the greatest attention by the contemporary Assyriologists. But I find it impossible to accept the absolute date for Hammurabi's first year i. e. about 1900, conjectured by him. The absolute chronology of the XII. Egyptian Dynasty and Amenemhet III's reign (see above p. 467), as well as the archaeological material from Ras Shamra and Tell 'Aṣḥūnah speak against it.

§ 7. Since there has thus, in my opinion, only been posited one chronological revision of the I. Babylonian Dynasty, which rests on so many-sided a material that, so long as new elements have not appeared, it must be regarded as justifiable to take it as our point of departure, viz. 1894–1595, Hammurabi 1792–1750, I have throughout this book used this covering of the Amurru Dynasty, which we owe to Sidney Smith, as my foundation. In the years 1936–1938 I made a series of chronological studies which were concluded on the 4.2.1939 but were not published until 1941 owing to the German invasion of Denmark on the 9.4.1940, at a time when I was prevented from obtaining any knowledge of Sidney Smith's and Albright's results. In that work, *Chronology of the Shub-ad Culture*, the history of the dating of the Amurru Dynasty in Assyriological research is recorded from 1884–1938¹ since I was anxious to establish a fixed chronological point of departure so as to be able to arrive at absolute chronological figures for the period previous to Amurru and back to Ur I. By the name of the Shub-ad culture I had previously during my work² designated the culture with which we had become acquainted through Woolley's great finds in the tombs of Ur excavated in 1926–30 and 1931–32³ and which I relatively equated with the Ur I Dynasty period. After the historical survey of the various tentative datings of the Amurru Dynasty by which I was enabled to become acquainted with the whole of the text material I studied the astronomical foundation for the calculations of Kugler (1912, 1922, 1924) as well as of Fotheringham (1923, 1928). My result, which was based exclusively on texts, was a refutation both of Weidner's (1917), Kugler's (1922), and Fotheringham's (1928) initial dates for the Amurru Dynasty, 2057, 2049, and 2169 B.C., respectively.

¹ *Chronology*, pp. 235–302.

² *Ibid.* pp. 1–234.

³ *Ur Excavations II: The Royal Cemetery* (1934).

The dates at which I myself arrived for the Amurru Dynasty, viz. 2185–1886, Hammurabi 2083–2041, I see now, convinced by the new text material from Mari sifted during the war, and the archaeological results in the Near East, must be abandoned and give place to Sidney Smith's above-mentioned chronology. As regards the dates in the period from Ur I to the I. Babylonian Dynasty the relations in absolute figures between the various changing dynasties and centres of power were calculated partly from the well-known seven Dynastic Lists partly from archaeological material, e. g. the Lugal-anda seals.¹ I think it justifiable therefore to retain in this book the correlation of these dates, it being merely necessary to alter the absolute figures as a result of the point of departure, the dating of the Amurru Dynasty, being quite different according to Sidney Smith's chronology. For details I must refer the reader to my *Chronology of the Shub-ad Culture*, pp. 324–448, and point out that, apart from the dates of the Amurru Dynasty, the rest of the figures below are based on my own calculations.

Ur I	2459–2309 ²
Lagash: Ur-Nina–Eannatum	2459 ³ –2433
Lagash: Enannatum I–Enannatum II	2432–2357
Akshak and Kish III	2433–2335
Lagash: Enetarzi–Urukagina	2356–2313
Kish IV	2334–2303
Erech III (Lugal-zaggisi)	2313–2289
Agade	2303–2108
Naram-Sin	2224–2187
Ur II	2231(?)–2124
Gutium (first arrival: 2221)	2187–2097
Lagash: Gudea ⁴	ca. 2130
Ur III	2123–2016
Lagash: Ur-Ningirsu	after 2108
Erech V (Utu-lugal)	2097–2091
Larsa	2026–1762

¹ *Chronology*, pp. 324–27 and 100–123.

² E. O. Forrer, *Forschungen* 5. Heft (1947): 2945–2795; P. Van der Meer, *The Ancient Chronology of Western Asia and Egypt* (1947), Table I: 2472 + X – 2295 + X.

³ E. Sollberger, *AOF* XVIII 1 (1954–55), pp. 10–48: Ur-Nina 2494.

⁴ Gudea as a contemporary of Ur-Nammu and Shulgi, cf. also S. N. Kramer, *Orientalia* N. S. 22 (1953), p. 191.

Isin	2022-1797
Amurru (I. Dynasty)	1894-1595
Hammurabi	1792-1750
II. Dynasty (Sea-Land)	1741-1430
III. - (Kassites)	1740 (1430)-1165 ¹

§ 8. Datings for the period previous to the Ur I Dynasty cannot be given in absolute figures. In my *Chronology of the Shub-ad Culture*, on pp. 410-28, I investigated the relations between Egypt and the earliest cultures of Mesopotamia with the result that the period about 3100-3000 B.C. was the approximate dating for the Uruk IV culture.² This means that the time from 3000-2460 comprises the Jemdet Nasr Period plus Frankfort's Early Dynastic Times I, II, and III a, whereas E. D. III b, according to Henri Frankfort³ is identical in time with Ur I and Ur-Nina and successors in Lagash. As regards the details it is difficult to say anything with certainty. I have in 1941⁴ stated my doubts about Frankfort's tripartition of the E. D. Period, amongst other things because as far as Ur is concerned we have a gap from Frankfort's E. D. I to E. D. III b. Be this as it may (see above pp. 433 ff.), the Jemdet Nasr Period plus the Early Dynastic culture-approach, which puts forth its first flower in the Ur I culture seems so far as we know in 1955 to cover the period from 3000-2460 B.C.⁵

¹ For higher figures (prior to Ur III) than mine, see Ungnad, *AOF* XIII (1939-41), pp. 145-46 (published 1940) and G. Contenau, *La civilisation d'Assur et de Babylone* (1951), p. 331.

² Above in Chapter VII § 12 we mentioned the Menes date 2830, suggested by Hanns Stock in 1949, which has excited the interest of M. Allot, *JNES* IX (1950) p. 214; V. Gordon Childe, *New Light on the most Ancient East* (1954), pp. 4, 232-33, and is unconditionally accepted by Johannes Friedrich, *Entzifferung verschollener Schriften* . . . (1954), p. 5. The reason why I have here, in my final chronological considerations, disregarded this date and kept exclusively to my above-mentioned result from 1941 (Menes c. 3100-3050) is that Stock's Menes date is merely approximate; our lack of knowledge about the duration of the VIII.-X. Egyptian Dynasties and the more than questionable 230 years of rule of the I.-II. Egyptian Dynasties prevent us for the time being from ascertaining the fixed point of departure for Egyptian dynastic chronology.

³ *OIC* No. 20 (1936), pp. 35-59 and especially *JRAS* 1937, p. 337.

⁴ *Chronology*, pp. 403-04.

⁵ As for post-Hammurabian chronology, see below pp. 759 f.

CHAPTER IX

FROM SUMERIAN CITY GOVERNMENT TO BABYLONIAN EMPIRE

§ 1. At the beginning of historical times Mesopotamia was self-contained. The arrival of the Kishiotes (see Chapter VII § 15 and below) in the middle landscape seems to have broken off relations between the north and the south and all attention now centred round events between the two rivers. The urban areas grew in size and number, mutual competition led to armed strife which created a disturbance in the daily work of farming and cattle breeding, the greatest damage and unrest being caused by invasions from the east. The relation to these foreign peoples was marked solely by conflict and counter-pressure. But from the 2nd millennium Mesopotamia was no longer isolated; large states, similar to those in the land round the two rivers had grown up in the west, and political considerations and purposes in constant interaction with powers outside Mesopotamia now determined the actions of the leaders of the state.

It is possible to present a continuous history, as far as the isolation period is concerned (3rd millennium B.C.): for the second half of the period we have only detailed inscriptions from Lagash and the Dynastic Lists written down some time during the Isin Dynasty (2022–1797). But excavations have established that important displacements between the individual city areas took place already in prehistoric times. Thus Arpachiyah, the centre of the rich Halaf pottery in the north, was uninhabited from the Jemdet Nasr Period, while Shuruppak, Nippur, Adab in the south, and Eshnunna and Khafājah (the old Tupliash?) in the middle landscape were found to have been first inhabited in the same period; the most southerly city Eridu seems mainly to be known to us from the Ubaid Period. It is certain, however, that the religious cult of this very city, in connection with that of Nippur which was built much later, was of the greatest importance in the history of Mesopotamian religion. But politically we find no trace either of Eridu

or of Nippur. Great gaps in our knowledge interpose many obstacles to a clear view.

Of the northern city areas we know nothing in historical times until Assyria presents itself as a unity to our view; before this only the archaeological discoveries speak to us. But in the south Erech (Uruk), Ur, and Lagash furnish reliable data, as far back as the Ubaid Period, and in the middle district or in northern Babylonia, Kish. In Early Dynastic Period III b¹ (c. 2459–2304) we at once find the Sumerian cities dominant e. g. Ur, Lagash, and Erech (Uruk), which in prehistoric times had a period of high culture, at the same time as the Semitic Kishiotes have their fixed habitation in the ancient area of Kish.

The advent of the first Semites in Mesopotamia cannot be dated with certainty, nor is it known whence they came; out of respect for Bedřich Hrozný's tremendous achievements in the interpretation of the cuneiform Hittite inscriptions, I shall pass over the grand visionary constructions which led him in 1941 (²1943) to see the original home of the Indo-Europeans as well as the Semites in Transcaucasia. All that we know with certainty is that sites of cities where a Semitic language was spoken were found in Mesopotamia in the earliest historical period known to us, and that names such as Mari, on the upper Tigris somewhat south of the inflow of the Habur, Kish, Akshak and Gazur (later Nuzu, modern Yorgan Tepe) southwest of Kirkuk, denote Semitic enclaves among the settled peoples. In the time about 2433 B.C. the union of the dominions of Kish and Akshak in the North Babylonian district seems to form the beginning of a period of Semitic domination under the leadership of Kish. Hence I have chosen the term Kishiotes for the earliest Semites in Mesopotamia; they might also be called Agadeans after the city of Agade near Sippar, for from 2303–2108 this was the capital in the Semitic empire founded by Sargon I and comprising the whole of Babylonia. Modern philology has given the language of the Semites in Babylonia the name Akkadian in distinction from the Sumerian language of the settled people, but it is not for that reason correct to talk of Akkadians, for in the earliest historical times the Sumerians were settled in Babylonia; they call southern Babylonia where the eme-KU dialect was spoken, Shumer, which we usually spell Sumer, but call northern Babylonia with the eme-SAL dialect Akkad, but the inhabitants of both landscapes were Sumerians.

¹ See above Chapter VII § 11.

The impressive excavations carried out at Ur by the British Museum and the University of Pennsylvania under the leadership of Sir Leonard Woolley in the years 1922-34 have given us an intimate knowledge of the wealth and culture of the Ur I Dynasty, but the political centre seems to have been at Lagash. This city, which we can follow from the Ubaid Period, had its most prosperous time from c. 2459-2357 and the ruler Eannatum in particular had secured its position by victorious wars with other city-states. On the so-called "Stele of Vultures" erected by him we see Eannatum's heavy infantry ranged in a phalanx by means of which he triumphed amongst others over Ur, Erech, Kish, and the neighbouring state of Umma, as stated in the archaic inscription on the stela; the ruler himself is seen in his chariot at the head of the light infantry. Among the defeated states Elam too is mentioned; this is the first mention made of the neighbouring state in the east to which Mesopotamia throughout historical times imparted its culture, at the same time as constant military campaigns were directed against Elam, not least on account of the wealth of metals in that country. In the inscription Elam, it may be supposed, stands for the landscape alone; there can hardly be any question of a state, such a state not being known until the time when the Amorites were in Babylonia (1894-1595). We now know that the landscape which the Assyrians and Babylonians called Elam and the Sumerians NIM, "the highland", was inhabited by Halla tribes from the time of Ur-Nina of Lagash (c. 2459 B.C.), and that they called themselves and the country Haltamti, Hallatamti. Perhaps there is an Austro-Asiatic and Austronesian strain in the Halla tribes, but the personal names we know can be linguistically connected with the modern Caucasian languages. Whether the Halla-Elamites were ethnically and linguistically allied to the other invaders coming from the east into Mesopotamia, such as the Awanites, Lullubians, and Kassites, we do not know, nor do we know what peoples were the originators of the two kinds of pottery from Susa; Susa and Anshan (Anzan) are often mentioned together and in connection with Haltamti, but that may be a later combination.

The great victories of Eannatum in the east and in Sumer itself made Lagash the strongest city of Southern Babylonia; this happened in about 2449 but in 2433 the Kishiotes rose in Kish and Akshak, Eannatum was killed in battle and Lagash became subject to Kish. The foreign policy of Lagash under his brother's son Entemena was now confined

to wars with the city-state of Umma about a fertile border country, Guenna, to which both cities laid claim. In the meantime the eastern peoples had become bolder and in 2357 one of these, the Awanites, attacked Southern Babylonia, overthrew the Lagash Dynasty, and inflicted a severe defeat on Ur. Umma, under the sovereignty of a local ruler, Lugal-zaggisi (2313-2289), profited by the weakening of the Sumerian city-states from the attacks of the northern Kishiotes and the eastern Awanites. First Lugal-zaggisi subjugated Erech and now called himself *lugal unu(g)^{ki}-ga*, "King of Erech", but after reducing all the Sumerian city-states by overthrowing the rich and famous Ur I Dynasty and Urukagina in Lagash, so that the whole of Sumer was for the first time in the historical era united under one ruler, Lugal-zaggisi called himself *lugal kur-kur-ra*, "King of the Countries".

From now on up to 1894 B. C. Erech and Ur alternated as the dominant names while Lagash had lost all power in Sumer for good; the death of Eannatum in his war on the Kishiotes in 2433 marks the fatal year, but far down in time the city flourished peacefully until the Amorite invasion. The reign of Gudea (c. 2130) is so rich in inscriptions and monuments that from this period of peace Lagash has supplied us with excellent material affording an insight into Sumerian culture. In the Dynastic Lists from the Isin Period mentioned above, which, on a critical inspection, reflect the shifting of the power, Lagash, characteristically enough, is not mentioned at all. The Dynastic Lists suggest a central government, into which Nippur enters as a religious symbol, and which is due to the Kishiotes of Agade overthrowing Lugal-zaggisi at a time when the domination of Lagash had long since come to an end.

§ 2. But before we follow the historical events that resulted in a Babylonian central government, it would seem natural to pause for a moment to review what we know about the local Sumerian city government in Early Dynastic times. This was in some degree the same whether the city was independent or incorporated in a kind of feudal state, though retaining independent self-government. Perhaps Eannatum's victories led to the founding of a feudal state in Sumer under the supremacy of Lagash, a more probable conjecture is a feudal state under the suzerainty of Lugal-zaggisi. That the latter calls himself *lugal*, "the great man", which we render as "king", thus changing from the usual title of PA.TE.SI, governor of a city which some think should

be read phonetically *ensi*₂, (Akk. *išakku*), shows nothing conclusive about the founding of a feudal state. For in the earliest historical inscription we know the title *lugal* is used by A-anni-padda of the Ur I Dynasty (c. 2459-2309), and in Lagash by Ur-Nina, Eannatum (the "Stele of Vultures"), and the outwardly weak Urukagina.

However, the patesi is merely nominally the governor of the city; according to the Sumerian conception the city and its adjacent land was owned by a god, the chief god of the town, who is its actual ruler. The patesi is merely this god's representative on earth, the vassal of the god, who manages what belongs solely to the god. The god has chosen the patesi among the inhabitants of the city and together with other gods endowed him with qualities and strength to discharge his duties. Thus it is said of Eannatum: "His name is mentioned by Enlil, endowed with strength by Nin-gir-su, chosen in the heart of Nina, nourished with holy milk by Nin-har-sag, mentioned by a good name by Innina, endowed with intelligence by En-ki, beloved by Dumu-zi-abzu".¹ At the death of the patesi the god chooses his legitimate son as his successor; the office is hereditary.

The patesi is the god's vicar on earth and his duties, his official functions, must be viewed in this light. In the first place he superintends the temple service, keeps the buildings connected with the cult in repair, or causes new ones to be erected in honour of the god. That the patesi took part in the work on such occasions is seen from the so-called "family relief", found at Telloh, which represents Ur-Nina, Eannatum's grandfather, carrying in a basket on his head the materials for the restoration of a temple. That this official function was retained down through the ages may be gathered from an inscription which tells us of the rebuilding of Esagila's temple tower, Etemenanki, in Babylon in Nabopolassar's reign (625-605) more than 1800 years later: "I made an image of my royal person carrying a board with tiles and put this on the foundation stone. Before Marduk I bowed my head, I turned up my robe, the magnificent garment of my royal dignity, tiles and clay I carried on my head".²

Among the many other duties of the patesi we shall first mention that he is the protector of the city in war and its representative in all relations of the city with other urban communities. We have seen

¹ SAK, p. 20.

² 86-7-20, 1:II 56-67 (VAB IV (1912), p. 62).

Eannatum in his chariot at the head of the light infantry, flanked by the heavily armed phalanx; about the total levy of troops from the whole land it is difficult to say anything. The inscription on the "Stele of Vultures" mentions 3600 killed in Eannatum's wars, but whether this was the total and whether his own losses were included we do not know. From a later struggle between Urukagina of Lagash († 2313) and Umma, 60 killed are mentioned; from the time when the Awanites invaded Sumer (2357), 600 such are stated to have attacked Lagash. In Eannatum's brief period of conquest the numbers of the army were probably brought up to a higher figure than under normal conditions. When the army was mustered at the command of the patesi, the elders in the various trade corporations making up the individual sections, the strength of the army probably depended on the density of the population in the city. Gudea mentions that "Nin-gir-su looked with favour on his city and chose Gudea as the lawful shepherd of the country, so that his power might dwell among 60×3600 people".¹ With our sad experience of the numbers stated by the ancients in mind, we are unable to express any opinion with regard to a number of 200,000 inhabitants in Lagash at about the year 2130 B.C.; Urukagina, c. 200 years earlier, mentions the figure 10×3600 people in Lagash.²

To protect the city area by successful wars is to the patesi equivalent to protecting the interests of the city god. About the frontier war between Lagash and Umma in the time of Entemena we read: ". . . Nin-gir-su (the city god of Lagash) and [the god] X have established a boundary, King Me-silim of Kish at the request of the goddess KA.DI . . . has erected a stela in the place in commemoration hereof. Ush, patesi of Umma, was actuated by ambitious plans, he removed the stela and entered the field of Lagash. In accordance with Nin-gir-su's command a campaign was carried on against Umma . . ."³

Peaceable and quiet conditions are essential to the prosperity of the property of the god, the city-state. The rich soil of the temple grounds, the abundant crops are, as was mentioned in Chapter I, dependent on the digging of canals. In addition to the superintendence of the temple services and the command of the army in war, the patesi has the function of protecting, improving, and extending the local canal system. From

¹ SAK, p. 68.

² *Ibid.* p. 50.

³ *Ibid.* pp. 36, 38.

Ur-Nina to Urukagina the patesi of Lagash tell us of this official duty. Thus we read: "Entemena, patesi of Lagash, whose name has been spoken by Nin-gir-su, built, upon the just command of Enlil, upon the just command of Nin-gir-su, upon the just command of Nina, a canal from Tigris to the great river".¹ But the mere digging of canals will not promote fertility, the will of the god in this respect is alone decisive, and the patesi who eagerly promotes divine worship and increases the wealth and joy of the god by building temples, to him (Gudea) does Nin-gir-su speak thus: "When the foundations of my temple have been laid, abundance shall come. The vast fields shall give you [crops], [the water in] ditches and canals shall rise. In the fissures of the earth which are dried up the water shall pour forth. In Sumer oil shall be poured out in profusion, wool shall be weighed in abundance".²

The city temple, or the city temples, are also the centre of the whole economic life of the city-state. As far as we can see, all the land was the property of the temple, except for the private grounds of the patesi, so that the sole property of the citizens consisted in movable goods, dwelling-houses, and slaves. But trade and commerce too were directed by the temple administration, whose leader was the patesi. He superintended the agricultural work, the tending of the farm animals, and the fishing in the river, the citizens being divided into various groups, each carrying out their particular occupation. Further the patesi saw to it that the citizens were supplied with bread from the mills and bakeries of the temple, that the wool of the flocks was made into articles of clothing in the spinning and weaving shops, some of these goods being exported by the merchants of the temple, who in return brought home raw materials which the city lacked; even the making of strong drinks offered for sale in the public houses came under the temple administration. How far the store of copper ore for weapons, implements and kitchen utensils was fetched by traders sent out to Elam, Caucasus, or Asia Minor we do not know. Probably the Subaraic North³ in Early Dynastic times served as a transit station; a Sumerian military administration from this period has been found in Assur.

¹ *Ibid.* p. 40.

² *Ibid.* p. 100.

³ Cf. Chapter VII § 16.

§ 3. Thus the city god, through his earthly representative the patesi, was the protector and promoter of the city in every respect; every city government was an absolute theocracy centring round the temple and the person of the patesi. It follows that the latter, in contrast with the other citizens of the town, like the god, owned private property. From the period in Lagash intervening between the ravages of the Awanites (2357) and the founding in 2313 of Lugal-zaggisi's Sumerian feudal state, we possess a series of texts which afford insight into the private life of the patesi. Thus Lugal-anda's 7 estates are mentioned, comprising a total of 161 hectar, while his consort, Barnamtarra, had two large landed estates comprising a total of 66 $\frac{1}{3}$ hectar. We have accounts in which it is recorded when a lamb is prepared for the table of the patesi, or fish is cooked to be served in the harem. We know the names of the inmates of the harem, and the amount of the rations for their meals; we hear of the harem of the patesi's children, and the attendant servants. We learn that the patesi and his family did not live isolated from and exalted above the citizens, but when Barnamtarra was delivered of a daughter, artisans sent her valuable gifts and the wife of an ecclesiastical functionary made her a present of a kid. We cannot tell whether the great importation of costly and rare goods mentioned e. g. by Gudea (dolerite, marble, basalt, asphalt, gold dust, silver, copper, cedar wood and ebony) served for private enrichment or was part of the ornamentation of the newly erected temple of the city god, but when we are told that Urukagina brought wine in large measures from "the countries" (*kur-la*) to a building E.KAŠ.GAR,¹ this may be private importation.

The patesi's relation to the citizens is manifested in his superintendence of the cult in the temple and his administration of the economic life of the city. But that he also watched the mutual relations of the citizens and took care that in the terms of the much later Code of Hammurabi (1 37-39) the strong did not harm the weak, appears from Urukagina's cone inscription B and C.² As a background may be mentioned that after the invasion of the Awanites, who put an end to Ur-Nina's century-old dynasty, influential ecclesiastical families usurped the power in Lagash; though nominally Kish may still have had the supremacy in the town. Under the various priestly rulers great irregu-

¹ SAK, p. 42.

² *Ibid.* p. 52.

larities seem to have prevailed to the great detriment of "the weak" citizens; Urukagina who called himself *lugal*, "king", of Lagash and who perhaps made himself independent of Kish, tried to remedy these conditions.

Urukagina dug a canal for Nin-gir-su through one of the quarters of the city, and now he could say that he had freed the children of Lagash from drought. But theft and murder too were prevented. The old-time rules were re-introduced by Urukagina (*nam-tar-ra ud-bi-ta*), when Nin-gir-su bestowed on him the kingship of Lagash.¹ He made a clean sweep among boatmen, ass-drivers and shepherds, managers of fisheries and granaries, fixed the payment due to priests for officiating at funerals, fees which had been shamelessly screwed up in the previous period of disintegration. A superior was prevented from exerting pressure on an inferior to make him sell an ass dog-cheap, and members of the priesthood from entering the garden of an indigent mother to steal the fruit. "The mighty did not do injustice to the orphan and the widow",² Urukagina concludes his account.

There is no doubt that Urukagina tried to root out the weeds in Lagash after the three usurpers who took over the power upon the fall of Ur-Nina's Dynasty. How long he ruled the city-state we do not know, we only know that his and his three predecessors' reign covers a period of 44 years. He emphasises in his introductory words that he has restored the rules and laws which were in force in the old days, i. e. before the usurpers. But he is said to have introduced two new provisions: regulations concerning the emancipation of slaves and provisions forbidding that a slave woman (*sal*) could be owned by two men, as in the old days (*ud-bi-ta*). Urukagina should thus be mentioned as the first ruler known to alter the laws relating to slaves, but with B. Meissner's attempt³ to turn him into a moral and social reformer we are on insecure ground. For the provision concerning the two men does not apply to a wife but to the labour of a female slave, and the assertion that Urukagina abolished serfdom is due to a misinterpretation of the text. Pl.LUL.DA (cp. Akk. *billudê*) with the addition *ud-bi-ta* denotes the fixed religious order or cult prevailing in the old days which Urukagina notes still existed when he came to power. And the words about the liberation

¹ *Ibid.* p. 50.

² *Ibid.* p. 52.

³ *Die Könige Babylonien und Assyrien* ... (1926).

of slaves which Meissner combines with his mistaken reading "serfdom" only occur 162 lines further on in the text. And parallel passages show that this refers to the liberty which slaves can obtain in the legitimate way.

Of course it was only possible in the very earliest times for a patesi to manage the religious, civil, military, and economic life of a city without any help from an organised civil service. But moreover it must be remembered that the theoretical implication that the city god is the sole owner of the city-state, must entail the registration by or delivery to the patesi or his representatives of all kinds of products. Thus from the earliest times the city government must have had a rather extensive administrative machinery. What we know with certainty about this in Early Dynastic times is not much, but a few features have been definitely established.

The temple as the religious and economic centre of the city must have been the heart of the administration. It had a civil head (*agrig*) as well as a religious superintendent (*uriš-gal*), who was charged with the guarding and the purely external care of the religious objects of every kind. The cult ceremonies were performed by the priesthood (*sanga*) who were divided into many different groups according to their religious functions and had many names, but who do not concern us in this connection, whereas it is important to note that the chief function of the patesi, besides the leadership of the city's armed forces, was that of high priest (*en*) of the temple, and while in all other fields of activity he was replaced by various officials subordinate to him, he continued to function in these two offices down through the ages.

The patesi's nearest helpers were *sukkal* and *nu-banda*. The former, as *sukkal-mah*, may perhaps, with all reserve, be compared to the grand vizier of Osmanli Turkey. He was the right hand of the patesi in the internal administration as well as in foreign affairs, but perhaps the office is of later date than that of *nu-banda*. The latter seems originally to have managed the private estate of the patesi and later also to have had charge of the counting and receipt of dues from the citizens. But this functionary must also have been in charge of the agricultural work; thus we learn from a text dating from the time of Urukagina of Lagash: "21 *gur-sag-gal*₂ (a measure of capacity) of barley for sowing and asses' fodder. Eniggal, the *nu-banda*, delivered it from the new

barn to the ass driver Anikurra in the month of Guddunesar".¹ The numerous clay tablets on which the accounts of the city governor and notes concerning agriculture, stock keeping, and trade were inscribed, were kept in the "tablet house" (*e₂-dub-ba*) which had its superintendent and a numerous staff of scribes (*dub-sar*). The taxes for the administration of the city were collected by *maškim*, "caretakers" (?); they were found all over the country. "From Nin-gir-su's borders to the sea *maškim* were found",² says Urukagina to begin with, and concludes his account of the clearance he made in Lagash by stating that they have been dismissed. The citizens' taxes were brought to the temple in the form of woven clothes, bronze objects, birds, and goats; the peasants and gardeners delivered the natural produce of the fields; this could be replaced by silver (*kug*); "the shepherds who drive the woolly sheep brought silver for want of a white sheep", says Urukagina.³

In contrast with *sukkal-maḥ*, who is the most intimate adviser of the patesi, the term *sukkal* alone is used about high officials, amongst others about the man who directs the harem of the patesi. On the other hand the term *šakkanak* (*šagub*) seems to denote the deputy of the patesi in a captured city and so occurs in the main in the feudal period in those cases where the victorious city either replaces the defeated patesi by a regent or forces a control officer on the subjugated patesi. It may be mentioned that the title *nu-banda* is also used about an official in contexts where we should expect the term *šakkanak* to be used.

That the patesi's family, his harem, and his blocks of buildings must have kept numerous workers employed, so that we can talk of a kind of court, appears from accounts from the time of Lugal-anda. Thus his consort Barnamtarra paid wages to a carpenter, a brewer, a cook, and a baker, an oilbearer, a worker in precious metals, and a potter (?);⁴ that Barnamtarra used her court craftsmen not only in her private household but also to supply sacrificial gifts to the temples is seen from another text in which her deliveries of flour, beer, and bread to the feast of the goddess Baba are mentioned.

Of the citizens' legal position we have scanty information. We do

¹ W. Förtsch, *Altbabylonische Wirtschaftstexte aus der Zeit Lugalanda's und Urukagina's* (1916), No. 1 (VS XIV 1).

² SAK, p. 48.

³ *Ibid.* pp. 46, 48.

⁴ W. Förtsch, *ibid.* No. 79.

not know the "old-time rules" which we have heard that Urukagina of Lagash re-introduced in the city after a time of unrest. Information that theft and murder and other abuses were punished and endeavours were made to exterminate them tells us nothing about the civil law. From a text from Urukagina's time, composed by the above-mentioned *nu-banda*, Eniggal, we gather that inheritance was legalised, for it is stated here that among 31 dead belonging to the personnel of the goddess Baba's temple 20 were without heirs; while among the 11 heirs sons, fathers, or brothers are mentioned.

Gudea, in one of his statue inscriptions, draws the picture of the just ruler and his age, and we need hardly add that it is himself, as the shepherd chosen rightfully by Nin-gir-su, of whom he is thinking: the women did not lift the carrying basket, it was the men who built; nobody was whipped, and "in Lagash no man who had a legal dispute went to the place of the oath".¹ The latter passage must mean that Gudea, by his orders, had checked litigiousness. But that judicial proceedings took place in his time is attested by himself in a cylinder inscription in which the court (*ki-di-kud*) is mentioned as being on some part of the temple premises. That the taking of the oath was part of the judicial procedure appears from the above-mentioned statue inscription. In order to gain information about the Sumerian rules of court we must go to sources dating from the brilliant close of the Sumerian period represented by the Ur III Dynasty (2123-2016). The proceedings must be supposed to take place within the precincts of some temple: 2-4 *di-kud*, judges conduct the proceedings in special cases; they must no doubt have been members of the college of priests belonging to the temple. As a rule the cases are decided by the *maškim* officials mentioned above, they commit to writing the names of the witnesses (*lu₂-inimma*) and then try to reconcile the plaintiff and the defendant. If they fail to do so, the case is brought before the judges by three *maškim* who submit both the plaintiff's claim or contention and the defendant's answer. The quarrels of the citizens turned upon the purchase of slaves or goods for cash or on credit, barter, leases, and marriage and divorce contracts.

§ 4. The ancient Sumerian local government of which we have tried above to give the reader some idea, received a blow from which

¹ SAK, p. 68.

it never recovered when Lugal-zaggisi united all Sumer's city-states into one kingdom. It is true that in future periods of unrest individual states might break away and revive an independent urban government. The Gudea period at Lagash is an example of how the old city government is resurrected, though we must not forget that Gudea, nominally and actually, was dependent on the Gutians. But from the time of Lugal-zaggisi one great state succeeded another, though with interruptions, in Babylonia. A central government conducted by the victorious ruler and comprising large districts with many urban areas from now on remains the dominant impression to posterity.

Beyond his victories we know nothing of Lugal-zaggisi's reign of 25 years. He tells us himself that the god Enlil took care that he had no rival (or equal) from the rising to the setting sun and he "let the countries rest at peace, he watered the land (i.e. Sumer) with glad waters".¹ He mentions the cities of Uruk, Ur, Larsa, and Umma in similar terms: thus he undertook the digging of canals, ensuring the fertility of the cities. The word "peace", *u₂-sal-la*, literally means "on wide pastures" and refers to landscapes whose grass and cornfields are not trampled underfoot by enemy forces. It is possible that a central government was introduced during Lugal-zaggisi's 25 years of peace in the Sumer founded by him, local government being abolished everywhere. This seems to be indicated by the fact that Lugal-zaggisi calls himself "the superior *agrig* of the gods",² that is to say, the person who superintends all temple grounds in Sumer; further he refers to himself as *sukkal-mah* for Sin, the highest deity of Ur, and emphasises that "Enlil, king of the countries, has given him the royal power (*nam-lugal*) over the "land" (i.e. Sumer)."³ For the latter statement recalls to us the founding of Nippur, Enlil's holy city, as the central sanctuary of Sumer, otherwise we should have expected one of Uruk's or Umma's deities to have been mentioned in this connection. Thus there is much which suggests that Lugal-zaggisi can be compared to Shih Huang Ti of the Ch'in Dynasty (256-206) who laid the entire administrative foundation on which not only the glorious Han Dynasty (202 B. C.-221 A. D.) was based but, in its broad features, the form of the Chinese state until 1912.

¹ SAK, p. 154.

² *Ibid.* p. 154.

³ *Ibid.* p. 154.

§ 5. However, it is only from our information of the succeeding years that we can follow the evolution from a local city government to a central administration. In the preceding part we have seen that the Semitic rulers in the North Babylonian landscape Akkad, with the cities of Kish and Akshak as centres, from the year 2433 made raids on Sumer in the south and amongst other regions subjugated Lagash. The excavations conducted at Kish by S. Langdon (1923-33) have shown us that the culture of the city is of an entirely Sumerian character. The Bedouin Kishiotes who drifted into Mesopotamia brought no cultural elements with them beyond their language, other gods, and their own national character. We cannot follow the development in detail in c. 2300 in Akkad, but Sargon (*Šar-ru-ki-in*), son of the Semite La'ipu, a high official under one of the kings of Kish, seized the power and gradually subjugated the whole of Sumer with Kish as his starting point. The ever-victorious Lugal-zaggisi's capital city of Uruk was captured and destroyed (2289), and "he knocked him down (i.e. Lugal-zaggisi) and placed him in an enclosure at the Enlil gate (in Nippur)".¹ Through this symbolic act Sargon showed that as the master of Nippur he was the vicar of the god in Sumer; in fact, he said that he had received his kingdom from the hand of Enlil. By thus repeating Lugal-zaggisi's formulae on taking over the power he testifies to us that it was the latter who made Nippur the chief sanctuary. Sargon undertook great building operations in Kish but chose a newly founded city, Agade, near Sippar, for his residence. With Sargon the Agade Dynasty arose (2303-2108) and the most glorious period, next to the time of Hammurabi (1792-1750), in the history of Babylonia was initiated.

The rulers of the dynasty were Semites, its cultural substratum was entirely Sumerian. It was under the Agade Dynasty that Babylonian culture came into existence as a mixture of these two elements, though most weight must be attached to the Sumerian heritage. And what is more, it is almost impossible to segregate the specifically Semitic features. We can take a survey of Semitic culture and religion as known to us outside Mesopotamia, build up an abstract concept which we call Semites, and use this as a general denominator for our guidance in our study of the Babylonians. But a conscientious inquirer well knows that such generalisations can hardly be used even as working hypo-

¹ G. A. Barton, *The Royal Inscriptions of Sumer and Akkad* (1929), p. 100.

theses. It is the living cultural whole which must be studied, and analysis alone without too much genetic speculation can afford us some insight into this. Hence we cannot give an account of Sumerian apart from Semitic-Babylonian culture, but can merely point out such details relating to the Sumerian city-state theocracy as have been mentioned above.

Sargon reigned for 56 years from 2303. We know hardly anything about his internal policy, all records derived from him deal with wars, but probably he laid down the general lines of the administration as we find it in his grandson Naram-Sin's reign. From the time of Lugal-zaggisi Nippur was retained as the centre of the state religion, and Enlil was its highest deity whose vicar on earth was the king, but besides the spiritual centralisation there was a purely administrative one. In one of his inscriptions we read: "From the lower sea (i. e. the Persian Gulf) sons of Agade (i. e. Kishites) hold the offices of city kings." This statement would seem to show that in his realm Sargon retained the old idea of the city-states as separate administrative and economic units, but as the leading patesi he appointed his own officials in each place.

Sargon, who alternately calls himself king of Kish or of Agade, in the first part of his reign subjugated Akkad, then Sumer. The whole of Babylonia was now united under one ruler. He established the boundaries and the independence of his realm by 34 wars; in the east Elam, in the north Subartu, an area which at that time almost coincided with the later Assyria, were conquered and ravaged, so that the rear and flank were free during the expansion westward. The expression "the upper sea" in Lugal-zaggisi's inscription has been interpreted as the Mediterranean, which I hardly think is right; more probably the Lake Van is meant. But from Sargon's inscriptions we see that he made military expeditions to the west; an epic poem, *Šar tamhāri*,¹ "The King of Battle" records his expedition to Asia Minor; the cedar woods of the Amanus mountains and "the silver mountain", presumably situated in the Taurus of Asia Minor, are mentioned as regions he holds in his hand; also Alalah was conquered by Sargon.² As a strategic point between Babylonia and the west he had previously,

¹ E. F. Weidner, *Boghazköi-Studien* VI (1922); W. F. Albright, *JSOR* VII (1923).

² Sir Leonard Woolley, *A Forgotten Kingdom* (1953), p. 61 attributes the destruction of the Level XII buildings to Sargon's conquest.

in the third year of his reign, secured Mari on the middle Euphrates. It is hardly probable that Sargon incorporated these extensive regions in his realm and appointed Agadean city kings there, but by hasty raids he secured trade connections with the west. That he had these much at heart is seen from the statement that vessels trading to southern and eastern Arabia and the Persian Gulf rode at anchor in the river port of Agade. Finds of cylinder seals from the Indian Pre-Indo-European Mohenjo-daro or Harappa culture in the Sargonic building strata in Mesopotamia testify at this time that a trade connection had been established, probably by way of the Persian Gulf, with Mohenjo-daro.

"Enlil's hand raised no opponent against King Sargon,"¹ he says, quite in the spirit of Lugal-zaggisi, and a considerable army must have backed up Sargon's widespread extension of his power. The figures quoted above with some reserve under Eannatum are entirely thrown into the shade by those of the Agade Dynasty. We know that the patesi of the local government, apart from the city-state officials mentioned above, personally had at his disposal merchants (*damgar*) and "horsemen", who took his messages outside the city area; that *ningir* superintended the mustering of his soldiers; and that a bodyguard (*nid*) watched over his personal safety. Viewed against this background, it seems rather overwhelming when we read in one of Sargon's inscriptions "54,000 men daily take their meals in his presence,"² for even though the figure cannot be accepted as the number of his bodyguard, it may, with reservation, give us an idea of the maximum size of the army. At any rate Sargon's 34 wars and his constant victories imply military superiority; of figures for the soldiers of the opponent which we know from the time of his son Rimush, we may mention that the city state of Kazallu, east of the Tigris almost in the same latitude as Samarra, in one battle lost 12,650 dead and 5864 captives, while Ur and Umma allied against Rimush had mustered 13,500 men.

Sargon's realm was made up of a number of Sumerian city-states, each of them an independent state within the state, and in the course of time the Agadean city kings appointed by Sargon often sided with the city-state. Of Sargon's last years it is said: "In his old age all the countries rose against him and enclosed him in Agade."² Sargon

¹ G. A. Barton, *ibid.* (1929), p. 108.

² L. W. King, *Chronicles . . .* II (1907), p. 6.

was able to defeat them: "Sargon then made an armed sally and annihilated them. He caused their great army to perish."¹ Under his sons Rimush and Manishtusu the Agade Dynasty fought for its existence with Kazallu, Elam, Ur, and Adab. "All the countries which my father Sargon had left me rose against me, none remained faithful," we read in Manishtusu's inscription.² But it would seem that the brothers, each in his own time, defeated their enemies. Manishtusu even speaks of "32 kings of the cities beyond the sea"; we cannot localise this expedition outside Babylonia itself, but it implies a considerable naval force. It is certain that Manishtusu, after his brother Rimush had been slain in a revolt, by dint of much fighting regained control of the trade routes to Lebanon and Taurus and restrained his enemies in the north and east. At the same time it is interesting to note in the inscription of Manishtusu's beautiful diorite obelisk composed in two languages, Sumerian and Akkadian, that the latter had strengthened his royal power by keeping a standing army distributed over four different Babylonian cities; the expenses for this were defrayed by means of very large pieces of land which Manishtusu had acquired. The royal power is on the way to becoming independent of the individual city-states of the realm which, since the last years of Sargon, had incessantly risen in revolt in varying coalitions.

§ 6. Under Naram-Sin (2224-2187), Sargon's grandson, who reigned for 38 years, the external power of the Agade Dynasty culminated, at the same time as the internal political power was consistently centralised in the king's person. After a revolt with Kish and Sippar as the leaders had been signally defeated, Naram-Sin restored his grandfather's power in the east, north, and west by victorious campaigns. A good deal has been written about Sargon's as well as Naram-Sin's mastery of the world, and later legendary narratives from the 14th to the 12th century as well as a geographical text with a map of the known world from the 7th to the 5th century have contributed to give credence to this. We should however reserve our judgment and merely note that the Agadean kings pushed westward as far as the regions near the Mediterranean, ravaging and striking terror as they went and thus securing their trade connections with the west. But

¹ L. W. King, *Chronicles* ... II (1907), p. 6.

² V. Schell, *Mém. Délég. en Perse* II (1900) and *RA* VII (1910), pp. 103 ff.

we cannot speak of vassal states paying regular tribute, or Agadean vicegerents, or officials appointed in places where campaigns had taken place.

"Magan he (i.e. Naram-Sin) vanquished and Mani . . . Lord (*bêl*) of Magan, he slew (?), in their mountains he quarried (?) stones and brought (?) them to his city of Agade."¹ It was the hard, much coveted diorite Naram-Sin seized. Magan has been variously interpreted to mean eastern Arabia, the Sinai peninsula, and Egypt. The first locality should be preferred. Expeditions to Armanu (the Aleppo region), to the regions round Antiochia, Alalah², and Amanus, to the Armenian Diarbekir on the upper Tigris where one of his stelae has been found, show the conqueror's westward route. Important strategic points on the way were Mari and Nisibis (Naşibina) in Syria. South of the latter in modern Tell Brak at the Habur river a large palace built by Naram-Sin has been found.³

The westward advances secured raw materials and trade and were a kind of organised pillage; the chief object of the fighting in the north and east was to safeguard the existence of the country. Everything seems to show that the Assyrian landscape in a narrower sense was part of Naram-Sin's state; the danger from the pressure of the eastern peoples recurred and the northern part of Subartu served as a buffer for Babylonia (Akkad + Sumer). Sargon already records his raids on Subartu: ". . . later he advanced on Suhartu . . . he inflicted defeat on their vast army and carried their possessions with him to Agade";⁴ Rimush and Naram-Sin, on the other hand, built temples in Nineveh.

The eastern Awanites, who harried Sumer (Lagash and Ur) in 2357 became Naram-Sin's vassals; the earliest state treaty known to us, written in Elamite, was drawn up between Naram-Sin and Awan.⁵ Elam too was dependent on the Agade king, the proto-Elamite writing gave place to the Sumerian-Akkadian cuneiform script, the coloured pottery of Susa disappeared, Sumerian influence asserted itself throughout Elam which after the defeat of Hubshumkibi, king of Marhashi, seems to occupy the position of a vassal state. Naram-Sin erected buildings in Susa and put up statues there. The Lullubians in the

¹ SAK, p. 166.

² Cf. Woolley, *A Forgotten Kingdom* (1953), p. 61.

³ M. E. L. Mallowan, *Iraq* IX (1947).

⁴ L. W. King, *Chronicles . . . II* (1907), p. 6.

⁵ V. Schell, *Mém. Délég. en Perse* XI (1911).

neighbourhood of the Zagros Mountains, north-east of Sulaimaniyah, were defeated and to commemorate this event the magnificent stela, later moved to Susa, was raised; this is the most beautiful monument of Akkadian art, perfect in the unity of its idea, the life and concentration of the action, and surpassing the Sumerian monuments of art in form and execution. The Lullubians and Gutians were perhaps related to the Elamite peoples; the latter occasionally made war on Naram-Sin without much success, but in the 38th year of his reign they defeated him; this put an end to the brilliant period of the Agade Dynasty, the kingdom was dissolved, and for a long period alien peoples from the east dominated Babylonia.

In internal affairs Naram-Sin crowned the work initiated by Lugal-zaggisi and Sargon. Cylinder seals show that in South Babylonian Sumer, e.g. in Lagash, Agadean officials were appointed who used the Akkadian-Semitic language and call themselves "your servant" (*warad-ka*), while at the same time we have evidence that administrative rules and decisions were made the subject of correspondence between the king and the leaders of the various city communities. As a further link in the centralisation of the government of the realm in the capital we see Naram-Sin's introduction of a common dating for the whole kingdom; the king gives each year its designation, we may mention as an example: "in the year when Naram-Sin laid the foundation of Bêl's temple in Nippur and of Innina's temple in NINNI.EŠ₂."¹ Such a year formula replaced the old Sumerian dating by the years the local patesi had ruled. Like his predecessors since the time of Lugal-zaggisi Naram-Sin safeguarded the chief sanctuary of the realm in Nippur by building, but as an expression of his more advanced ideas of a unified realm appears his new royal title superseding the old formula King of Kish or King of Agade, viz. "King of the four quarters of the world" (*šar ki-iḫ₂-ra-tim ar-ba-im*). These are localised by means of the names Sumer, Akkad, Subartu, and Amurru, the "west country" (with the Armanu and Magan districts).

By this new title the strong royal power, which was based on the strength of the armed forces and vast landed estates, tried to emphasise that it was not a power in which the separate city-states such as Kish, Uruk, or Agade dominated the rest of the city-areas, but a unified kingdom had come into existence ruled by a king who in the exercise

¹ SAK, p. 226.

of his power had brought regions outside Sumer and Akkad under his sway. And to complete the movement divine worship was centralised by the deification of Naram-Sin. His full title with his name attached runs thus: "the god Naram-Sin, the mighty, god of Akkad, king of the four quarters of the world" (^{ilu}na-ra-am-^{ilu}sin da-num ilu akkadim^{ki} šar ki-i₂-ra-tim ar-ba-im). If we consider the modest title "King of Akkad" borne by the succeeding Agadean kings and recall that the great Hammurabi in the preamble of his Code merely calls himself "the shepherd that Enlil has mentioned by name" (ri-i-a-uni ni-bi-il^{ilu} EN.LIL)¹ and whom Marduk has sent to rule the people, we shall understand the constitutional and religious revolution implied by the deification of Naram-Sin. The patesi of the Sumerian city-state was the vicar of the city god, the god owned the city as well as the surrounding land. Naram-Sin was the god of Akkad, of Northern Babylonia, his property was Akkad; the royal power was now an institution owning property, the realm belonged to the king. And at the same time he was its religious centre; he could gather round him all the inhabitants of the realm, whether they lived at Ur, Lagash, or Uruk which each had its local gods, so that he was not only a secular lord but also a rallying point for the cult of the new kingdom. Externally too the god Naram-Sin was a beacon to the subjugated aliens in the east, north, and west, and was only rivalled in the religious world by Nippur's Enlil, a reminiscence from Lugal-zaggisi's attempt to identify a feudal with a unified state. Posterity went other ways, the rulers of the Hammurabi Dynasty made the previously rather unknown god of their capital the central deity of the realm. Hence the deification of Naram-Sin is a sure sign of the mightiness of the royal power and its bearer's consistent constitutional ideas as a direct continuation of the Sumerian idea of the city god. That his unified realm suffered a temporary disintegration at his death in the war against the Gutians was due partly to the violence of the Gutian invasion, partly to the fact that the idea of a central administration had not yet assumed flesh and blood among the many century-old city communities that wished to remain autonomous, and only a strong king was therefore able to compel them to obedience.

§ 7. Under Naram-Sin's son Shargalisharri the Gutians were in the country and there was a continuous struggle ending in the victory of

¹ Codex Hammurabi I 51-53.

the Gutians in the whole of Northern Babylonia. Gutium was the name given to the enemy's country by the Sumerians; it was situated in the north-eastern part of the mountain district of Zagros, north of Sulaimaniyah. From the inscriptions of the Gutian kings we see that the names of the rulers were linguistically related to those of the Elamites, but of the population we learn from a reference to them under the Hammurabi Dynasty that in contrast with the "blackheaded" Sumerians, slaves from Gutium and Subir (i.e. Subartu) were fair. This suggests Subaraic peoples dominated by Iranian settlers such as the Elamite Halla peoples, just as later on Indo-Europeans in small numbers were the dominant race among the Hurritic Mitanni peoples or among the Elamite Kassites. The Gutian rulers seem at first to have intended to carry on the traditions of the Agade Dynasty. Thus Lasirab used the Akkadian language and Erridupizir called himself "King of the four quarters of the world" and presented gifts to the god Enlil in Nippur. The alien rulers seem only to have gained a sure foothold in Northern Babylonia. In ancient Sumer we have evidence that several city-states (Uruk, Umma, Lagash) with comparative independence developed their trade and attained a high culture without the interference of the Gutians. In another connection (p. 492) we have mentioned the extensive importation by Gudea of Lagash of rare goods from the most different parts of western Asia, commercial undertakings which require peaceful conditions in the country. From this we may infer that the Gutian kings merely kept up a kind of feudal state in Babylonia and exercised the supreme power, while the individual city-states, at any rate in the south, were independent with their own local government and governors; the strong royal power and Naram-Sin's united kingdom had perished.

The first attack of the Gutians on Mesopotamia took place in the first years of Naram-Sin's reign; nominal supremacy was exercised by them for 91 years (2187-2097); the peaceful conditions in Gudea's time which had permitted the latter to import cedar wood from Lebanon, porphyry and marble from Meluhha, copper from Kimash, and other metals from Elam, seem later to have been succeeded by a lawless state. He (i.e. the deity of Gutium) set up "enmity and wickedness in the country," we read in Utu-hegal's inscription,¹ and again "from him who had a wife, his wife was carried away, from him who had a

¹ Fr. Thureau-Dangin, *RA* X (1913), pp. 99 ff., cf. *RA* IX (1912), pp. 111 ff.

child his child was carried away." The formerly powerful southern city-states Ur and Uruk revolted at last, Ur seems to have been subject to Utu-ḫegal, the ruler of Uruk who in 2097 defeated Tirigan of Gutium in the battle of Dubrum. It was Enlil of Nippur who since the time of Lugal-zaggisi had been regarded as the king of the countries, the real master and owner of Sumer and Akkad, who sent out Utu-ḫegal and gave him the kingship of Sumer after he had placed his foot on the neck of the captive Tirigan; further Utu-ḫegal assumed Naram-Sin's title, calling himself in Sumerian "King of the four quarters of the world" (*ḫegal-an-ub-da-limmu-ba*).

Utu-ḫegal's power was of brief duration (2097–2091), but when he defeated and drove out the enemies from the land the name of Uruk was for the third time inscribed with glory in the history of the Sumerians. The first time was in the prehistoric age when in a period of high culture writing was invented and Egypt drew inspiration from Mesopotamia; the second time was when Lugal-zaggisi created the Sumerian feudal state with a tendency towards a unified kingdom by recognition of Enlil's sanctuary at Nippur.

§ 8. It was, however, Ur, whose first ruler of the third dynasty, Ur-Nammu, had for a time recognised Utu-ḫegal's supremacy, that seized the power and from 2123–2016 was sole ruler of Mesopotamia. This period is the last Sumerian period of greatness, characterised by vast building enterprises and by a complete organisation of the central administration. The Ur III Dynasty had a peaceful time, war was only carried on at the frontiers of the realm after the first period of unrest had passed. During that period Assyria was incorporated in the kingdom and in the east Elam and Anzan (Anshan) were subjugated.

Of Ur-Nammu and his time we know little apart from his great building operations which will be mentioned elsewhere. His title "King of Ur, King of Sumer and Akkad" is suggestive of the feudal state and at any rate records that Babylonia alone was his dependency. His son Shulgi (or Dungi) later called himself "King of the four quarters of the world", Naram-Sin's old empire seems to have been reborn, and at the same time we meet with the idea of the unified realm, the governors of the city-states assuming the character of royal officials who can be moved from city to city. Common weights and measures were introduced into the realm, date-formulae established by the king

were valid throughout the kingdom as in Naram-Sin's time. At the same time the abundance of temple archives from this period afford an insight into the king's control through his officials of the accounts, supplies, pay-lists etc. of the temples. And finally Shulgi was deified like the succeeding kings.¹

Thus nothing new with respect to the unification of the administration was created during the Ur III Dynasty compared with Naram-Sin's time. But complete unification was now possible because the realm was of smaller dimensions and the time was peaceful. For it cannot be doubted that the direct influence in the "west country" had been lost, the area dominated by Ur was Mesopotamia alone, but by subjugating Elam in the east the kingdom could enjoy peace for about a hundred years. The centre of administration was in the most southerly part of Babylonia, and Sumerian became the official language even though the last three rulers had Semitic names. The incorporation of Assyria must, however, have been of great significance. For the rulers of Ur thus obtained control of the caravan communication between Assur and the Assyrian "colony" of Kanesh (modern Kül Tepe) near Caesarea in Cappadocia, whose archives we know from the Kül Tepe texts, the number of which has been increased especially by B. Hrozný's excavations on the site (1925). In this way the rich treasures of woods and metals in Asia Minor must have come into the possession of the rulers of Ur.

We may establish as a fact that the Ur III Dynasty revived Naram-Sin's idea of a unified realm and carried it through in the administration, but of the relation between the royal power and the realm we can say nothing with certainty. That the rulers of Ur probably followed in the steps of Naram-Sin would seem clear from Shulgi's relation to Enlil at Nippur. From the archives covering a time of twenty odd years, found at Drehem, a small mound of ruins south of Nippur, we see that some kilometres from Nippur Shulgi established a store of enormous dimensions, consisting of all kinds of cattle, asses, birds, barley, wheat, metals, stores of rushes and reeds for various purposes. Everybody was bound to contribute to the resources of the depot and if a man owned nothing he had to work instead. Further every town had to contribute its share; thus a small city such as Babylon delivered

¹ Cf. Naram-Sin (above p. 504) and E. Douglas Van Buren, *ZA N. F.* XVI (1952), pp. 92-120.

its due in the course of a month, while a rich city like Lagash had four months in which to do it. Theoretically this depot was Enlil's property and part of it was used for the administration of the temple at Nippur. But further it ensured the existence of the whole court, thus it took the place of the land acquired by Manishtusu (see p. 501), and likewise the pay of the officials; finally it was at disposal for the relief of distressed areas in times of scarcity. It is evident that Shulgi by the Enlil depot created a kind of specific royal fund which made him independent of possible relapses to freedom in some of the city-states incorporated in the realm. And at the same time Shulgi had instituted a kind of exchequer which enabled him to meet the expenses of his public service. While Naram-Sin owned the kingdom by virtue of the power of his bodyguard and made the royal power independent of the kingdom, Shulgi made the kingship a separate state in the realm whose power rested on a financial depot of natural products.

One more feature indicates a central administration. Shulgi instituted a regular communication with his officials through couriers who according to the texts were provided with food and other things at the halting stages and equipped for their further journey; special guards watched over the safety of the roads. On the other hand, the idea of centralisation is not evidenced in the calendar; the names of the months vary from town to town. On the initiative of the governor of the city the beginning of each month is fixed by the local observation of the waxing moon, and the interpolation of complementary months decided on.

The strategic position of Babylonia was, as previously stated, quite untenable. Only in the north could a defence be set up, and as a matter of fact from the time of Sargon to the Ur III Dynasty we see the rulers of the south secure the overlordship over Subartu-Assyria. The great warrior princes kept the enemies in the west and east at bay; at first the peoples of the west were not properly organised, they became an easy prey to the Sumerian pillages, whereas the danger came from the east. Again and again in the preceding part we met with Pre-Indo-European peoples from western Iran, from the rural districts or the towns, such as Awan, Lullubu, Gutium, Elam, and Anzan as breeders of disturbances or invaders. Simultaneous attacks from the east and the west could perhaps be averted by the great conquerors of Babylonia (Sumer + Akkad), for the peaceful Ur III Dynasty it was impossible.

For the last 30 years of this dynasty the Amorites threatened from the west. We hear that Gimil-Sin, the last king but one of the Ur III Dynasty, built a fort to keep the Amorites in check, we meet with their West Semitic names in the workers' pay lists in the temple accounts. And at the same time Mari, the city-state on the middle Euphrates had risen to political power. The French excavations conducted by A. Parrot since 1933 have revealed a connection between the Semitic Kishiotes and the population of Mari. Thus we may mention that reliefs made of inlaid pieces of mussel shell (mother-of-pearl) on a ground of limestone are a common feature of the finds in Kish and Mari, and that moreover the dress represented there, worn by the king or whoever it may be, which besides being divided in front differs decisively from the Sumerian fringed garment, is known both from Kish and Mari. The finds from Kish can be assigned to the time about 2459 B.C., the period in Ur which I have called the Shub-ad culture.¹ If the Marites were originally of the same language and race as the Kishiotes they subsequently became culturally mixed with the Sumerians who, in order to secure their trade contact with the "west country" under Sargon and Naram-Sin, established garrisons in Mari. The Sumerian fringed dress (*kaunakes*), with the nude upper part of the body, then later acquired a great vogue in Mari, but physiognomically the bearded Marite differed decisively from the bearded and bewigged Sumerian, as we know him for instance from the cult figurines from Tell Asmar.

It is possible that the Amorites coming from the west held Mari as an advanced position from which to attack Mesopotamia; at any rate, in some texts Ishbi-Irra, who is called "a man of non-Sumerian race", together with the Anzanian Elamites (the King of Simash) overthrew Ibi-Sin of the Ur III Dynasty, carrying him away as a captive to Anzan. Thus terminates Ibi-Sin's reign of 25 years, but already after the fourth year of his reign the date formulae of the united realm disappear from the North Babylonian documents, and the Nippur area with the treasury founded by Shulgi must have been lost at the same time.

§ 9. The fall of the last Sumerian empire, the Ur III Dynasty, can be dated at about B.C. 2016. In the period that followed until the victorious Hammurabi in 1762 by force united North and South Babylonia into one empire, the foundation was laid for the new Babylonian culture,

¹ See my *Chronology of the Shub-ad Culture* (1941).

the chief characteristic of which was the repression of the Sumerians and their ethnical assimilation with the conquering Semites, so that an entirely new state arose, marked by a different social and economic structure. The realm of the Ur III Dynasty fell asunder, Ishbi-Irra chose Isin for the capital of his kingdom, which at first included the old city-states of Ur, Eridu, Uruk, and Nippur. But he was soon to meet an opponent in the newly founded dominion of the Amorite ruler Naplanum at Larsa, his successors losing Ur and Eridu to the kings of that country. In Northern Babylonia Kish and Eshnunna, among others, made themselves independent of the Isin and Larsa Dynasties in Southern Babylonia.

Apparently then the external picture of the life of the state in the period from 2016–1762 is identical with that with which we have become acquainted in the preceding part from the Sumerian city-state periods: a number of independent city areas with autonomic rule, their centres of gravity being marked in the south by larger economic and political units round Isin and Larsa. But if we study the documents of the period, we discover a social structure quite different from that of the Sumerians. Politically the age is marked by decentralisation, isolation from the non-Mesopotamian world, and a general decline in the exercise of a forceful foreign policy, while at the same time the excavations have brought to light an overwhelming amount of written material, which is in the most marked contrast with the paucity of texts left to posterity from the preceding periods of power.

The vast quantity of documents from the Isin-Larsa Period implies that the scribes as a class now constituted a large and important group within the community; originally associated with the patesi and the temple they were now a free occupational group, gathered and trained in schools, whose different types of writing can be fairly well distinguished. A more essential point is that the scribes now carried on their work in the service of private individuals, the texts containing contracts and agreements between such and dealing with estate accounts, administration documents, business agreements concerning farming or households; in short, they present unambiguous evidence that private ownership is now the normal thing. But this means that the old Sumerian idea of the city-state has been superseded by a new economic structure. In early Sumerian times all landed property belonged to the god or the temple, while the citizens were merely owners of inovables, slaves,

and their dwelling-houses; this economic unity had now been disrupted, and private capital was a fact.

Associated with this radical social revolution we note the use of the Akkadian language (see p. 486) as the ordinary language of conversation and in business, which means that the Semitic population of Babylonia made up of the Kishiotes' descendants and the Amorites from the west was now statistically in the majority compared with the Sumerians, so that not only the governors and rulers were Semites. How long it took before the Sumerian population was finally assimilated and absorbed by the more numerous Semitic Babylonians we do not know. But until the fall of Babylon the Sumerian language was used as the literary language and in the performance of the religious ceremonies in the temples; the position of Latin in the churches and universities of the occidental countries in the Middle Ages forms a parallel.

By retaining Sumerian as the language of the temple ritual and the means of literary communication among the experts in writing, the conquering and numerous Babylonians openly manifested their spiritual indebtedness to the Sumerians. In the Isin-Larsa Period the Babylonians transformed the Sumerian theocracy into a form of state which in many respects was reminiscent of that of a modern government. Socially and economically a revolution took place but spiritual life continued according to the Sumerian models. The inquirer who has with much toil through many years tried to disentangle the Sumerian and Semitic elements of the Babylonian religion knows that this statement is true. And the great difficulty of giving a description of the Babylonian spiritual culture in general lies precisely in the fact that our chief knowledge of it dates from a period when Sumerian and Semitic were inseparably bound up together.

But apart from this circumstance, of which any modern Assyriologist is now well aware, the texts from the second half of the Isin-Larsa Period are explicit on this point. Side by side with the countless documents relating to private capital which were mentioned above, we find numerous copies of Sumerian literature in its widest sense; indeed, it is the copyists of the Isin-Larsa Period who have preserved for us the evidences of Sumerian culture. Often in several copies, we have specimens of the chief literary products of the earlier period: religious epics, mythological poetry, and historical traditions. In this way it was attempted to preserve the heritage of the past, from which the new-

literature was then built up. New works may also have been added, as far as we can see from details in the line of thought, but the form in which these appear is the traditional Sumerian one; these works must form the starting point for anyone trying to determine the specifically Semitic element in Babylonian culture. See further Ch. XIV § 2.

If thus we possess unambiguous evidence that the Semitic Babylonians accepted their heritage with all its assets and liabilities, it is just as certain that politically, as the masters of Babylonia, they give evidence of the supremacy of the Semites over the Sumerians from prehistoric times. From lists of the changing dynasties that held sway over Babylonia from the earliest historical times, preserved in seven not unambiguous texts,¹ some of them in an extremely fragmentary condition, it can be established, fictively and constructively, that the Kishioties were the first to become masters of the whole of Babylonia. Exceedingly important details in these Dynastic Lists have given us an insight into Sumerian chronology, but taken as a whole the lists denote a Semitic construction of history similar to that which we know from the Old Testament. Hence it was no very happy idea that Thorkild Jacobsen² regarded Utu-ḫegal's brief reign as the period when the Dynastic Lists were made,³ for it was not until the Isin-Larsa Period that the great landslide in the Sumerian theocracy occurred, it was the melting-pot from which the new Babylonian community emerged, the results of which were enjoyed by the Hammurabi Dynasty. And it was not until the Isin-Larsa Period that the Semitic element became dominant in the population of Babylonia; the provenance of the Dynastic Lists can in fact be traced to Larsa and Nippur, and chronologically they were concluded late in the days of the Isin Dynasty.

While, as we have seen, the Isin and Larsa Dynasties in Southern Babylonia were fighting for supremacy in this part of the country where the Sumerians had had their stronghold from as far back as the Ubaid Period, the city areas of North Babylonia were independent. In 1894 B.C. Sumu-abum, one of the leaders of Semitic Amorites, with the city of Babylon as the centre, founded a state in North Babylonia which was to grow up to dominate Mesopotamia. More northerly still, the city-state of Eshnunna held a strong position, and farthest to the

¹ See my *Chronology of the Shub-ad Culture* (1941), pp. 324 ff.

² *The Sumerian King List* (1939; AS No. 11).

³ Cf. also F. R. Kraus, *ZA N. F.* XVI (1952), pp. 29-60.

north there was Assyria which, after the fall of the Ur III Dynasty, had its capital town of Assur left free, and took advantage of its trade connections with Asia Minor under Ilushuma who was contemporary with Sumu-abum; this Assyrian ruler even seems to have carried out successful campaigns against Babylonia.

Politically the Mesopotamian isolation, with the rivalry of its small independent states that so vividly recalls the later Chinese Chou period (771-256) in which the cultural foundation of China's future development was laid, seems to have been interrupted by the interference of Elam. This state, as we know, in company with the Semitic Amorites and with Mari as their sally-port, had overthrown the last Sumerian power as manifested in the Ur III Dynasty. We cannot follow the details, and a great many things are vague; we can merely note that in 1835 the Elamite Kudur-Mabug's son Warad-Sin ascended the throne of Larsa and after a reign of 12 years was succeeded by his younger brother Rim-Sin.

Elam at any rate did not obtain a firm footing in South Mesopotamia's rich corn districts, when the Sumerian central government, whose power also extended over Assyria, was overthrown. Whether it was Elam's intention by way of Larsa in the south to gain control of Mesopotamia we are not in a position to say. But from the 61 years of Rim-Sin's reign we have records of numerous campaigns. One of these completely wiped out the Isin Dynasty in 1797 B.C. and rendered this state subject to Larsa, which was now master of the whole of South Babylonia. That Rim-Sin, in his long reign, did not merely concern himself with strategic expansion is seen from the fact that the most extensive canal construction we know from South Babylonia was carried out by him (see p. 11), while we must also keep in mind the great literary contribution of the Isin-Larsa Period towards the preservation of the Sumerian tradition.

The crucial years in the history of Babylonia are the period from 1792-1762; in the first year Hammurabi ascended the throne of the city of Babylon as the fifth successor of Sumu-abum. The first years of this ruler cannot have been encouraging. The mighty state of Larsa under Rim-Sin dominated the whole of South Babylonia, and northeast of his own land the state of Eshnunna had control of the areas directly north of Babylon as far as the bank of the Euphrates. But moreover, in the northernmost regions Assyria under Šamši-Adad had gained

influence in northern Babylonia, so that in his first years Hammurabi as well as Eshnunna must have been forced to recognise Assyria as their master.

Hammurabi reigned for 43 years (1792-1750) but not until the 30th year of his reign did he take the initiative step towards action. With his strong army he first turned towards the northeast, conquered Eshnunna, pushed further east, and defeated Elam in the Iranian region. Through these victories he had paralysed his two chief enemies; Assyria had no longer Eshnunna as a buffer state, and Larsa in the south could not count on aid from Elam. The 31st year of Hammurabi's reign we are told in a date formula was the year when Hammurabi, putting his trust in Anu and Enlil with great force overthrew Emutbal and King Rim-Sin.¹ The victory over Larsa made it possible for Hammurabi to unite North and South Babylonia into one kingdom while the dominion over Emutbal (Yamutbal), a landscape between Elam and Sumer, prevented attacks from the rear. To render secure his Babylonian empire he conquered Mari and other urban areas northwest of Babylonia in the 35th year of his reign. Assyria too he rendered subject to his state, but it is uncertain when; we merely know that in the 37th year of his reign he fought successfully in the districts of northern Assyria.

¹ Cf. A. Ungnad, *RLA* II (1938), p. 180.

CHAPTER X

HAMMURABI AND HIS AGE

§ 1. Hammurabi's great achievement was that he united the numerous larger and smaller Mesopotamian city-states into one empire and rendered it secure in the east and west by his victories and conquests. The time from his victory over Rim-Sin to his fifth successor Samsu-ditana's defeat by the Hittites who sacked Babylon, the period 1762–1595, does in fact mark the period of the highest level of culture in the Babylonian kingdom. Politically, essential changes took place already under Hammurabi's successor, as we shall hear presently, but if the main stress be laid on the cultural aspect, no later period in the history of Babylonia can compare with the Hammurabi Dynasty (1894–1595) which naturally bears the name of the I. Babylonian Dynasty. What is more, after 1595 B.C. Babylonia ceases to be the dominant power factor in Mesopotamia, and among the many rulers enumerated in the succeeding 9 dynasties until the fall of Babylon in 538 B.C., only very few exercised a temporary influence in the whole of Mesopotamia. After the fall of the Hammurabi Dynasty it was the northern neighbour Assyria that drew attention to itself and when the Assyrians at the same time adopted the culture of the southern neighbour, the Assyrian kingdom became the second centre of gravity in Mesopotamian cultural history after the year 1300.

When the French expedition under the leadership of J. de Morgan found in 1901 in Susa, the capital of Elam, the stela on which Hammurabi's famous law code was inscribed it was only natural that all the interest in the I. Babylonian Dynasty should centre around this king. The historical accounts of his union into one realm of the old Sumer and Akkad rounded off the picture of the great ruler. Our time, on the other hand, which has at its disposal a larger material of sources than was available in 1901, realises that the age of Hammurabi marks the

termination of a long evolutionary period in which, as pointed out above, the Isin-Larsa Period plays the fundamental part. But we also know now that Hammurabi carried on the work of one of his predecessors. In 1894 B.C. the Amorite chieftain Sumu-abum founded a city-state with the town of Babylon as the centre, but it was his successor, Sumu-la-ilum, whose reign covered 36 years, 1880-1845, who was the actual creator of the 1. Babylonian Dynasty.

Sumu-la-ilum was not Sumu-abum's son, but seized upon the power and consolidated the sphere of influence of the city-state of Babylon. Canal construction was his first important task in order to secure the supply of corn for the city. "The Shamash-ḫegallum canal" near Sippar was dug, and he improved the irrigation system of the city by building, in the 12th year of his reign, the "Sumu-la-ilum canal" which 20 years later he repaired and lengthened. Next he rebuilt the defences of his capital on a large scale, and in the 13th year of his reign he was strong enough to capture and raze the nearby Kish, which by an open revolt against the new potentate, Babylon, had tried to re-establish itself as the strongest power in northern Babylonia in full agreement with its glorious past as one of the first Semitic strongholds in Mesopotamia. By constant campaigns Sumu-la-ilum extended his power southwards, and in the 27th year of his reign seems to have subjugated the Nippur area. He further strengthened his dynasty by making it hereditary and by beginning to reform the laws in those parts of northern and central Babylonia which were controlled by his troops. "The king's law", only known to us from report, presumably anticipated the codification of the imperial law which took place under Hammurabi.

Sumu-la-ilum's successors were unable to maintain the extended power of his city-state of Babylon, an essential cause being Elam's rising influence in the Larsa state in South Babylonia, which culminated in 1835 with the accession of Warad-Sin. And it was only by Hammurabi's great conquests that the city-state of Babylon was transformed into a South Mesopotamian empire. Hammurabi's remarkable contribution to the history of Babylon took the shape partly of a continuation of the new social-economic structure of the Isin-Larsa Period and of Sumu-la-ilum's civilising and legislative work, partly of a personal innovation by the centralisation of the imperial religion.

§ 2. In his own time Hammurabi was praised for his contribution to civilisation: "The lord who gave life to the city of Uruk, who provided its inhabitants with water in great abundance";¹ "the divine city king, wise and prudent, who extended the city of Dilbat's grounds";² "the wise and perfect one who established halting places and watering places for (the cities of) Lagash and Girsu",³ to quote from the preamble of his great law code; and later times have quite naturally turned their attention to his cultural organisation of the empire. But that Hammurabi was also a general of genius appears plainly from his military results in an exceedingly difficult geographical position. In the first 29-30 years of his reign he must therefore have given great attention to the organisation and training of his army. As far as we know, the army was chiefly recruited from the lower ranks of the rural and urban population, enlistment was compulsory and was termed "(going) the king's way" (*ana har-ra-an šar-ri-im*), a phrase which probably originally meant to go to war. No soldier was allowed to send a substitute in his place, § 26 of Hammurabi's Code runs thus: "If either a *rêd šâbi* (a runner, an officer's degree?) or a *bâ'irum* (fisherman, hunter, lightly armed soldier?) who is liable to serve does not appear but hires a substitute and sends him in his place, this *rêd šâbi* or *bâ'irum* shall be punished by death . . ." The army leaders were able, through the levying rolls of the archives, to check breaches of the king's rules of conscription. That, however, several free citizens in a town or in particular towns were exempt from military service, just as there were special cases in which exemption was granted, appears from the rich collection of letters from the Hammurabi Dynasty. Thus citizenship at Nippur seems to have been equivalent to discharge from military service, as we learn from the affair with Bêlî-idinnam's family, whereas we do not know why a shepherd who was enrolled at the king's command was discharged in order to return to his master. We have a clearer case in the decision of the governor of Emuthal on the occasion of a protest from the bakers' company. It runs thus: "He who is named Gimillum shall continue to be a baker, the rest (of the bakers) shall be enrolled as soldiers. Gimillum shall only serve as bak-

¹ Cod. Hamm. II 37-41; in the following Harper (1904) and Delmel-Bergmann (1953)'s text-editions are consulted.

² *Ibid.* III 16-20.

³ *Ibid.* III 36-42.

er but a substitute must be provided for him for the military service".¹ It is clear that Gimillum is discharged in order to supply the civil population with bread, in the same way one of two brothers can be exempted from military service in certain circumstances. In § 33 of Hammurabi's Code it is, however, stated explicitly that the recruiting officer is forbidden on pain of death to exempt a soldier from military service himself. The death penalty is also fixed in § 34 for those officers who ill-use the soldiers they have for training.

The king was commander-in-chief of the army, led it in war, and watched its organisation very closely in peace time, thus we have evidence that the commander makes decisions about details of the military units. The army seems to have consisted of a general levy for the defence of the empire, besides a standing army, "the royal group" (*kišir šarrūti*), which was used for rapid or large aggressive operations. The officers (*labuttá* or *luputtá*) and the non-commissioned officers (*dékú*) trained the privates who seem to fall into two main groups: runners, or those that march (*rédá*), and "hunters" (*bá'irú*), but we know nothing about the difference between these two kinds of infantry. On the other hand, we hear nothing of chariot fighters or cavalry and are also ignorant of the size of Hammurabi's levies or of his total army.

§ 3. The provisions concerning the levy of the troops, their organisation and centralisation afford an example among many of the character of the new empire, and we have mentioned the army first because it was by its aid that Hammurabi transformed the city-state of Babylon into a great power. His internal policy, however, is of most interest to posterity. "Hammurabi is indeed a ruler who is like a true (literally: breeding) father to his people; he has obeyed (?) the command of Marduk, his lord; in the north and the south he has won victories for Marduk, he has pleased Marduk his lord's heart, he has founded the prosperity and welfare of the people for all time and given the country a (law-) document" (*da-ni-lam*)".² Thus he is described in the epilogue of Hammurabi's Code, in the first place as the benefactor of the country and the people. But before he could begin to organise his new realm it had first to be made secure; he continued the work on the defences of Babylon which one of his predecessors Sunu-la-ilum had begun, converted

¹ A. Ungnad, *VAB VI* (1914), No. 35.

² *Cod. Hamm. XI.I 20-39.*

Sippar in the north into a strong fort and erected Rapiku and Kâr-Shamash on a level with modern Falûja as two advance forts, to protect the northern frontier of his kingdom. Assiduous canal construction went hand in hand with his care for the country's irrigation system; famous was the large "Hammurabi canal" which was completed in the 33rd year of his reign.

The centralisation of the civil administration is clearly displayed in the remains of Hammurabi's correspondence with his functionaries which have been preserved. It may be matters concerning canal digging, and Hammurabi's written order may run as follows: "Tell Sin-idin-nam, thus speaks Hammurabi: Summon the people who own the fields along the Damianum canal and order them to dig it out (i. e. clean it). Within this month they are to finish digging (i. e. cleaning) the Damanum canal".¹ Or: "As soon as you have received this letter of mine clean the canal in the city of Uruk within 3 days with the aid of the people at your disposal".² But the king also attended to the complaints of his subjects. The following letter was sent to a high official: "Tummumu of Nippur has informed me thus: 'In the village of Ubabu I had stored 10 *kur* of corn in (my) storeroom. Thereupon Awêl-ili opened the store room and removed all the corn I had stored there'. Of this he has informed me. Now I am sending this Tummumu to you. Let also Awêl-ili be brought before you. Inquire into their relations and then let Awêl-ili return the corn to Tummumu which he has taken from him".³ Hammurabi likewise intervened where rumours of bribery reached him; another letter runs thus: "As soon as you receive my letter you must look into the matter. If it is really a case of bribery, then seal up the silver and what has otherwise been taken as a bribe and send (it all) to me. *Muškenû* (i. e. the freeborn, see later) who have accepted the bribe and the witnesses who know of the affair, and whom Šumma-lâ-ilija will point out to you, let them (all) be brought before me".⁴ Again, the king takes care that the revenues come in according to plan; in the opposite case letters of the following type are sent: "As soon as you see this (letter) then (write) that one sends to you all the superintendents of the temples and Warad-Sin, son of Eribam, the

¹ A. Ungnad, *VAB VI* (1914), No. 42.

² *Ibid.* No. 44.

³ *Ibid.* No. 10.

⁴ *Ibid.* No. 31.

priest of the Shamash temple, who is under you, and the whole of their accounts. (Then) send them to Babylon that they may be audited (there). Day and night they shall travel so that within two days they arrive in Babylon".¹ We also know cases where Hammurabi sends messages relating to the calendar, not unconnected with the term for punctual payment: "The year shall have an intercalary month, the month that comes shall be written the 'second Ulûlu'. Further, in case a tax (be due) to be paid in Babylon on the 25th Tishritu it shall be paid in Babylon on the 25th day in the second Ulûlu".²

Hammurabi's vast correspondence is addressed especially to two recipients, Shamash-hâsir, who was steward of the royal demesne in the Larsa district, and Sin-idinam, who was vicegerent in southern Babylonia where the cities of Larsa, Uruk, and Ur were situated. In a military expedition to Elam, which amongst other things led to the removal of statues of Elamite goddesses, this Sin-idinam seems to have led the expedition corps. The letters are written in the Akkadian language which from now on becomes the only official language and which in the course of the centuries was to become the international medium of communication in the whole of Western Asia and Egypt.

Hammurabi's form of government is an absolute autoeracy. "I am the king exalted above the city-kings" (*šarrum ša in šar alim šu-tu-ru a-na-ku*),³ he says in the epilogue of his Code. And in another passage: "The great gods called me (to power), and I am the perfect regent, whose sceptre is rightful and whose good protecting shield is extended over my city".⁴ In other words, the Sumerian idea of the state as a theocracy has now been superseded by that of the absolute king chosen by the gods. Hammurabi is not a god, as the rulers of the Ur III Dynasty were; now the consequences have been taken of the revolution of the Sumerian ideas about the country as the property of the gods, which we mentioned as taking place in the Isin-Larsa Period, and in the shadow of which private capitalism grew up. To use Hammurabi's own words, he had been chosen by Marduk to reign over the people and to bring aid to the country.

Absolute autoeracy necessitates the constant intervention of the ruler

¹ *Ibid.* No. 15.

² *Ibid.* No. 14.

³ *Col. Hamm.* XL 79-80.

⁴ *Ibid.* XL 40-48.

in great and small matters, as shown by Hammurabi's correspondence; but it also requires a large and much branched civil service as the intermediate link between the king and the cities and provinces. It may be somewhat difficult to obtain accurate knowledge of the functions of the individual officials, but we may take a brief survey in order to give the reader some idea of the nature of Hammurabi's unified state. The patesian dignity, which was a manifestation of the Sumerian theocracy and was retained under the name of city king in local urban areas in the Akkadian form *iššakkum*, even in the Isin-Larsa Period, was now entirely superseded by such titles as *šak(k)anakkum* or *bél páhāti*, which denote the vicegerent of large provinces within the realm, and governors or city prefects in the case of smaller towns, villages and hamlets, the term *iššakkum* being rarely used to designate a kind of viceregal office e.g. in larger conquered regions. *Ḫazánum* was the leader of the city with respect to such urban affairs as were dependent on the empire; we should call *Ḫazánum* lord mayor; while *šak(k)anakkum* and *bél páhāti* were state officials, direct representatives of the king, and responsible to him with regard to taxes, militia, and trade agreements.

A very large group of civil servants were the *šápirú* or secretaries who were in the service both of the king and of his highest officials, the regents of the provinces and cities. They must have had all the routine business, and assisted by experts in writing, must have distributed the matters that came before them, made reports, and drafted answers. Abroad, that is to say, in those parts of the neighbouring states that were dependencies of Babylonia, the secretary had the position partly of a commissioner, partly of a controlling authority. Another large group of *šápirú* were under the steward of the royal domains (*mu'irrum ša bāb ekallim*), under whose administration were included all the royal estates, Hammurabi's private property of all kinds, whether metals, natural products, domesticated animals, fish ponds or landed property. The steward of the royal domains procured labourers for the royal land, took care that they were paid, entered into trade agreements and saw to the sale of the corn crops from the royal estates—as well as of the surplus dates. In consequence of the new position of the king the office of the steward was an office under the crown.

Other important officials were: the bailiff (*nāgīrum*) who had the supervision of everything that concerned the state slaves, their wages,

food and housing; *ab šábi* attended to the enlistment of the militia, often a troublesome task, as we have seen from Hammurabi's correspondence above, since it had to be checked through the rolls of the city archives. *Ab šábi* also functioned as a kind of state police, while their relations with the municipal authorities are vague, but now and again they are mentioned in connection with local trials. *Rakbum* is the name of the king's messenger who also carried what we should call letters of a private character (complaints, lawsuits concerning breaches of contracts, theft etc.). Through these *rakbû* Hammurabi was in constant contact with his officials throughout the country and was able to issue orders and decrees which were to be obeyed in the course of few days, a circumstance that must have been of the greatest importance by showing the officials as well as the population the swift intervention and great effectivity of the royal authority.

It is more difficult for us to judge of the working of the customs and tax departments and their mutual relations. As a kind of director general of customs the *mâkisum* assisted by numerous collectors (*mušaddinû*) travelled up and down the country collecting customs dues; we have texts mentioning what they collected and often see the duties paid in kind as with live lambs, or goats' wool. But we do not know whether these duties which came under the *mâkisum*'s sphere of activity had anything to do with imports and exports, whether they were excise duties connected with the local trade turn over or a tax on goods carried from one town to another etc. We merely know that every Babylonian subject had to pay taxes, this applied also to soldiers; and even impersonal but, on the other hand, very rich institutions such as the local temples, at any rate in the Hammurabi Period, as we saw above, had to pay taxes. How the taxes were imposed, and whether or not the state tax was included in the dues which, as previously stated, were collected by the *mâkisum* and his assistants we do not know with certainty. But it would seem that the fiscus (*exehequer*) was on many points represented by a "fiscarius" (financial secretary) who as farmer general of the state revenues directly collected the taxes and later settled accounts with the king; *šápir tamkarim*, literally secretary to the merchants' guild appears in various documents as a kind of leader of the tax collection. The letters from the Hammurabi Period are full of complaints about default in the prompt payment of taxes, while, as we saw above, attempts to take advantage of the

intercalated month to delay payment in certain years were often checked by royal command. Of course we are unable to decide whether the taxes of the Hammurabi Period were a light or a heavy burden on the population, since we have no knowledge of what we now call the purchasing power of the money or natural products or of the ground value of the land.

It was mentioned above that in the *hazānum* the towns had a supreme leader in all things that exclusively affected the city as such. This does not mean that the old Sumerian city-state now cropped up again in disguise, nor that Hammurabi's empire afforded possibilities of municipal self-government, but merely that purely local affairs, particularly relating to commerce and judgments affecting the local community came under the city government alone. As the leader of the administration of the city appears *rabiānum*, who presided in the council of elders (*šibūtum*). The latter had power amongst other things to take decisions in all local lawsuits presided over by the *rabiānum* who officiated as the highest judge.

The *šibūtum* was made up (by election?) of the landowners, *awilā*, of the city and in larger towns also included the merchants, *taṃkarū*, who everywhere formed a guild (*kārum*) often under the leadership of a chief merchant, a secretary (*šāpir taṃkarim*), who, as we saw above, could obtain great financial influence in the state and who could for instance act as tax-farmer. It may be taken for granted that the merchants too were *awilā* but were probably distinct from these, amongst other things by different forms of land ownership marked by a gradation in the rating assessment. With respect to the other two classes of citizens besides the *awilā*, the literal meaning of which is simply "human beings" it is easy to envisage the *wardū*, or "slaves", since their class has been very exactly defined in the provisions of Hammurabi's Code, of which later. It is more difficult to form an idea of the class intermediate between the landowners and the slaves, called *muškēnū*; these are free men in so far as they are not slaves, but to regard them as the middle class of the empire in contrast with the imperial nobilities, *awilā*, would be to take a European view of the case.

§ 4. The difference between *awilā* and *muškēnū* is another. In all communities where a differentiated monetary economy has not

as yet been evolved the ground value together with the crops harvested from the land is the standard by which the amount of the private capital is measured. The Sumerians, who were a pronounced peasant people, had, in addition to the landed proprietors who farmed the land for the god who was the sole owner of it, another class within the community which was called *mašda*; I think that this was originally the term for those who lived by hunting and fishing in contrast with the agriculturists. In texts and vocabularies *mašda* and *muškēnū* are mentioned side by side but since the difference between hunters and agriculturists had long since vanished in the Semitised Babylon of Hammurabi's Age, *muškēnū* must now mean the landless who in contrast with the *awīlū* support life by performing subordinate menial work. This may be fishing for others, or handicrafts for some great merchant or other employer, or they have subordinate posts under the temple administration, on large estates or in the widely ramified administration of the court. But the essential thing to keep in mind is that *muškēnū* were free men, their legal position being different from that of the slaves, even though they were landless; and gradually as the cities grew and private capitalism was accentuated through the increasing export trade of the empire, they sank lower financially and in many ways can be compared to the poor of our communities, the proletarians. It is also characteristic that *muškēnū* were not used in the army among the fighting troops but were employed in the army service corps, as we see from the account of the eight campaign of Sargon II; this is entirely in keeping with the fact that in Hammurabi's Code smaller fines are everywhere fixed for their offenees. Where an *awīlum*, on breaking the law, is liable to the strictest provisions of the *jus talionis* a *muškēnum* can settle the matter by paying a fine. The legal rules do not give expression to gentleness or leniency towards the *muškēnū*, but hereby place them in an inferior position to the important "men" of the empire, the *awīlū*, and are a proud demonstration of the proverb that "noblesse oblige". The difference between the two free orders extends further and also appears in their relation to the gods; from the letters it appears that the offerings which a *muškēnum* was bound to bring to the temple personnel were of another and more humble kind than those brought by distinguished persons (*rubū*); here the line between poor and rich is emphasised.

The characteristics of the *awilû* are land ownership and commercial activities. From the I. Babylonian Dynasty's later period, e.g. the Ammi-zaduga Period (1646-1626) the letters plainly evidence that *awilum* is used as a kind of title before Babylonian names, so that *awilû* may with some justice be referred to as the landed aristocracy of the empire. In the city the eldest among these constitute themselves as a special council which has all the authority as regards the administration and in lawsuits. They act as experts in litigation, and their decisions have a juridically binding character. As a purely external sign of their class, *awilû* let their hair grow long at the back of their heads.

Outside the circle of free men are the slaves, the *wardû*. Actually and linguistically the Sumerians regarded these as objects, not as human beings; their fathers are not mentioned in the texts where the descent of the *awilû* is usually noted. In farming accounts they are enumerated as pieces. Externally they are easily recognisable; their heads are shaved and they are also branded as slaves. As we shall presently see, Hammurabi's Code has very exactly defined the legal position of the slaves. They were not without rights and were treated humanely in the owner's own interest. A special position was occupied by *warad êkallim*, "the court or palace slaves", and by those who had originally been associated with the administration of the temples, but had been liberated and then presented to the god. The great slave population of the empire was recruited from at home and abroad; prisoners of war could be used as slaves but it was especially by purchase that the Babylonians obtained foreign slaves. The "fair" (*namrum*) slaves and slave girls from the northern regions such as (Gutium and) Subartu were especially in great request.¹ While the court and the temples employed many slaves, the slaveholding of private individuals was limited, a couple of slave women was the norm, while male slaves were rarely found in private households.

The native slaves who often constituted the bulk of the "house slaves" were either descendants of slaves or recruited from freeborn *awilû* or *muškênû* who were unable to pay their debts. The law, however, set limits to the duration of their service as slaves; it was not

¹ Cf. e. g. VATh 1176, 8-10 (F. E. Pelser, *KB* IV (1896), p. 44) and VAT 980 (O. Schroeder, *VS XVI* (1917), No. 65).

to be continued because of a sudden embarrassment. Hammurabi's Code § 117 runs thus: "If an *awilum* is in debt and sells his wife, son or daughter, or gives them under (the) power (of another) then they shall work for three years in their purchaser's house or for their (new) master, in the fourth year they shall be given their *andurâru*," a term which denoted the lawful liberation of slaves.

Thus the Babylonian society in Hammurabi's time was socially stratified, with private capitalism as the central factor and constituent basis. In the long history of Babylonia and Assyria, however, we never meet with any struggle or antagonism between the king and the landowners or capitalists; the king was the autocratic central administrator of the realm, chosen by the gods to promote the welfare of the country and its people, and the aiding and supporting of private capitalism were part of the king's endeavours. The revenues, secured by tax collection, increased through the prosperity of the merchant class and the great crops of the landowners. The digging of canals which increased the fertility of the land became a link in the king's natural interest in the strengthening of the empire by the greater contributions of the landowners and the higher taxes of the merchants, since rapid communication by way of the vast canal systems promoted trade and increased the profits of the merchants.

The land of the empire was now owned not only by Hammurabi and the temples but also by the *awilâ*. This shows plainly that the Sumerian theocratic state had perished forever, and that the new time which was inaugurated by the Isin-Larsa Period had now become a fact which had transformed the structure of the community. Private ownership had definitively been made legitimate. An *awilum* might, for various reasons, inter alia because as a merchant, *tamkarum*, he traded to foreign countries, farm out his land and live in town, and since this gradually became common, the private tenant farmer, the intermediary between the landowner and his holdings with farm animals, slaves, and crops, now appeared as a new social element.

Finally, as a result of private ownership, we encounter partly the legal concept which we call testament, partly a clash between the interests of two or more private owners which can only be smoothed out through judicial decisions. Testaments are the legal expression of the fact that the state sanctions private ownership, but we know little of the details; we have evidence of people making their wills

before they start on a journey, a circumstance which shows us partly that in those days journeys were difficult and dangerous, partly that the Babylonians were cautious and showed foresight. But the provisions in Hammurabi's Code concerning inheritance, about which later, express the fact that the state desired to give a general rule for the distribution of the testator's earthly goods. I hardly believe that this interference was an attempt to prevent abuses and individual decisions, more probably Hammurabi's "law of inheritance" is one more manifestation of the idea of juridical centralisation that dominates the whole of Hammurabi's Code, the rules laid down for the distribution of the inheritance being intended to replace different customs and usages which had been established from the old days in the various cities of the empire.

In quarrels between private individuals who held different views of the right limitation of their proprietary rights in some mutual relationship, courts whose composition has been mentioned above passed judgment throughout the country. The judgments of the courts referred both to civil cases between private persons and to criminal cases in which the prosecutor might be a private individual or a representative of the municipal government. But it must be remembered that a criminal case might be a state affair and that therefore one of the representatives of the state police, might appear at the trial as prosecutor or judge, we do not know which. Appeal to the king as the supreme instance in the administration of justice was always possible; indeed, from Hammurabi's letters it would seem that from the very beginning anyone might appeal directly to the king, in the case of a complaint; only in rare instances did Hammurabi then decide the case at once without first letting one of his local officials investigate the matter more closely. Since the rights of an individual in relation to another were clearly defined in Hammurabi's Code the procedure was that civil as well as criminal cases were decided on the evidence of witnesses, evidence which might be accompanied by an oath, whereas trial by ordeal, a decision taken in accordance with the judgment of god, rarely took place.

Hence Hammurabi's empire appears to a late posterity as a centralised secular state, socially divided into three orders, and with full recognition of private ownership. The person and activity of the king actively and actually represent the centralisation of the empire,

supported in the daily work by a specially trained and widely ramified staff of officials. Through direct complaints and the right of appeal the local courts are subject to the supreme instance of the central administration, the king. All this shows that Hammurabi's state carried on the social and constitutional revolution which took place in the Isin-Larsa Period. Hammurabi developed and further established the new idea of the state which the Babylonian Semites adopted instead of the Sumerian theocracy. But in two particulars Hammurabi created something new and both ideas served the purpose of centralisation: the local laws and religious rites were replaced by the law of the empire and the state religion. By the realisation of these two ideas Hammurabi made a contribution which cannot be valued highly enough, for in this way he created not only an absolutely safe framework for his empire which became unified in a secular as well as a religious respect, but also created public security for the citizens and a form of religion which gave them confidence and rounded off their view of life.

§ 5. In the inscriptions it is often said about the Sumerian and Akkadian rulers in the period prior to the Hammurabi Dynasty that they saw to it that justice was done in the country. Above on p. 493 we mentioned Urukagina's revival of the old laws from before the time of the usurpers in Lagash. About Sargon of Agade we are told that he was "the king of Justice speaking (words of) Righteousness";¹ Ur-Nammu, the founder of the Ur III Dynasty, is called the king who has let the sun-god's just laws and righteousness prevail,² while Sin-idinam of Larsa is termed *sib₂ nig₂-gi-na-ge*, "the shepherd (keeper) of justice".³ But law codes before the time of Hammurabi are also known, though in a fragmentary state, chiefly two Sumerian codes: Codex Ur-Nammu⁴ and Codex Lipit-Ishtar,⁵ as well as the ancient Akkadian Codex Bilalama, better known as Codex Eshnunna.⁶

¹ II R 48 Obv. b., 40: *Sar-gi-na šar ki-ti da-bib ki-ti*.

² SAK, p. 188: I 15-18.

³ *Ibid.* p. 208: A II 13.

⁴ S. N. Kramer, *Ur-Nammu Law Code* (*Orientalia* N. S. 23 (1954), pp. 40-51).

⁵ A. T. Clay, *Miscellaneous Inscriptions in the Yale Babylonian Collection* (1915; *Yale Oriental Series. Babylonian Texts* I), No. 28, Pl. XVI and pp. 18-27; and H. F. Lutz, *PBS* I 2 (1919), Nos. 100-102, Pls. CVII-CIX, cf. also V. Schell, *RA* XVII (1920), pp. 35-42.

⁶ A. Goetze, *Sumer IV* (1948), pp. 63-102 (text and translit., transl.); also translated by Goetze in J. B. Pritchard, *Ancient Near Eastern Texts . . .* (1950) pp. 161-63.

From the fragments at Istanbul from the Nippur excavations of Codex Ur-Nammu we see little, even though a prologue and 22 laws have been found, owing to the dilapidated state of the remains. But from the code of Lipit-Ishtar, the 5th king of Isin, who lived 85 years after Ishbi-Irra and c. 170 years before Hammurabi's laws were published, a code which we know from four tablets from Nippur and Warka (?), we see that the Sumerian law code has been very like that of Hammurabi. A total of 25–26 laws may be counted, but on the basis of fragments found at Nippur Fr. R. Steele¹ thinks that Codex Lipit-Ishtar may be estimated at about 100 clauses (a complete Codex Hammurabi c. 300); Steele's fragments also bear much resemblance to Hammurabi's laws, e.g. III 17–21 and VIII 46–50: Cod. Ham. XVI 4–9 and XXXVII 22–27 (§§ 59 and 247). Whether these parts of Codex Lipit-Ishtar are laws at all, i.e. extracts from a collection or collections of enacted laws or whether they are merely a series of school-texts selected from various legal sources, as e.g. the so-called Sumerian family laws² which are part of the 7th tablet of the series *ana itlišu*, as was early pointed out by Th. G. Pinches³ and later by B. Landsberger, can hardly be decided. But if they are merely scholastic texts the redactors of Codex Hammurabi cannot have used them, but we may perhaps be allowed to draw the conclusion that Lipit-Ishtar codified a law-book, since he expressly says in an inscription: *i-nu-mi ki-i-ta-am i-na ma-at šu-me-ri-im ū a-ga-ti-im aš-ku-nu-ni*,⁴ "When I established justice in the land of Sumer and Akkad."

In Codex Eshnunna, which was among the rich finds from Tell Abū Ḥarmal, (1945–1949), the name of King Bilalama is mentioned; the latter was contemporary with Gimil(Šu)-Sin of Isin and reigned shortly after the fall of Ur III. The language is Old Akkadian. The number of law clauses is 59, and one fourth of these are more or less directly reproduced in Codex Hammurabi, just as

¹ AJA LI (1917), pp. 158–64; perhaps the texts in Clay (see above p. 528 note 5) No. 27, and II. de Genouillac, TGL XV (1930), Pls. LXXII and LXXIII, originally belonged to Codex Lipit-Ishtar.

² II R 10, V R 24.25; published with a translation, first by Paul Haupt, *Die sumerischen Familiengesetze* . . . (1879); George Berlin, TSBA VIII (1885), pp. 230–70: K. 256; last ed. see B. Landsberger, *Die Serie ana itlišu* (1937; MSL I), pp. 101 ff.

³ TSBA VIII (1885), p. 273: "that the text of which it forms part is rather a list of precedents than a code of law."

⁴ A. T. Clay, *Misc. Inscr.* . . . (1915), No. 27: 24–26.

a number of technical or semi-technical terms have the same meaning in both law codes. On the other hand it must be pointed out that the arrangement of the subjects in Codex Eshnunna is quite different from that in Codex Hammurabi, besides clauses that belong together being separated from each other in a most chaotic way, e.g. § 37, the collapse of a house, and § 58, the falling of a wall. This fact, as well as the circumstance that clay tablets, not stone, are used, as in the above-mentioned Sumerian family laws, again suggests that they are scholastic texts for use in schools.—Of law-making after Hammurabi we have no certain evidence. But we know a fragment of a collection of legal provisions from late Babylonian times, BM 82-7-14,988, which was published in 1889 by F. E. Peiser,¹ and which B. Meissner² later subjected to a special investigation.

The idea of replacing the local customary law by a single law of the empire dates back to the time of Sumu-la-ilum, but we do not know how large a legal material Hammurabi possessed on which to base his law code. But since the date formula for the second year of Hammurabi's reign runs thus: "The year when Hammurabi established law in the land,"³ it is possible that he could early begin the codification of the new law thanks to the work of his predecessors. It is also possible, however, that the date formula of the second year must be understood to mean that peace and order had been restored in the country. At any rate we cannot disregard the fact that the date formula for the 22nd year of Hammurabi's reign would seem to indicate that in that year the codification of the law of the land was completed. It reads as follows: "The year when the statue "Hammurabi is the king of justice" (was made),"⁴ and it seems suitable that the completion of the law for final publication should be celebrated by erecting a statue of the king as the lord of the law commemorated. But in that case the legislative work must have been done before Hammurabi's great military conquests in that long period of waiting when his kingdom was squeezed in between Assyria in the north and Rim-Sin's Larsa state in the south.

The basic text of the Code of Hammurabi, the phallos-like diorite

¹ *Sitzber. d. Kgl. Akad. d. Wiss. zu Berl.* 1889, pp. 823-28.

² *Ein Entwurf zu einem neubabylonischen Gesetzbuch* (*Sitzber. d. Preuss. Akad. d. Wiss. zu Berl.* 1918, Nos. XV-XVI).

³ A. Ungnad, *RLA* 11 (1938), p. 178.

⁴ *Ibid.* p. 179.

stela c. 2 $\frac{1}{4}$ metres high which the Elamites at some unknown date stole and carried off to their capital Susa, where it was found nearly undamaged in 1901 at the French excavations conducted by J. de Morgan, does not favour this view, since the Preamble refers *inter alia* to events in the 31st year of Hammurabi's reign. However, the years around the 31st year of his reign, which were filled by extensive military operations, seem little suited for the codification of the law of the empire, and an investigation of the relation between the Susa text and the fragmentary texts of the Code in fact seems to testify to the existence of several "editions" of the law in Hammurabi's time.¹ And further, as a result of an investigation of the fragments we may probably establish that the Susa text, even though it may have been the original from which a group of fragments was copied (one Neo-Babylonian and the earlier Assyrian texts), was not the *Editio princeps*, "the first edition."

On the other hand, it can hardly be disputed that the Susa text as we know it, a magnificent piece of epigraphic workmanship, technically most exacting since the inscription is very long, was intended by Hammurabi to be the monumental "standard edition" of his law; the place where it was later erected was probably Sippar, the city of Shamash. Thus he himself says in the Epilogue: "In order that the strong shall not injure the weak, in order to lead orphans and widows in the right way, I have in Babylon, the city whose head (the gods) Anu and Bêl have raised, in Esagila, the temple whose foundations are as firm as heaven and earth, in order to proclaim the law of the land and decide the rules of the land and guide him who has suffered injury on the right way I have caused my exalted words to be inscribed on (this) my stone document and caused it to be erected in front of the statue of myself as the king of justice."² That one copy of the law stela was erected in Marduk's main temple in Babylon, Esagila, as well as in other large city temples appears with all plainness from the following words of the king which, however, may be only an ideal claim to be understood in a metaphorical or symbolical sense: "Let him who has suffered injury and who has a law-suit (pending) come before my statue as the king of justice,

¹ Cf. J. Læssøe, *JCS* IV (1950), pp. 173-87; J. Nougayrol, *RA* XLV (1951), and especially G. R. Driver and John C. Miles, *The Babylonian Laws* I (1952), pp. 29-34.

² Cod. Hamm. XL 59-78.

let him read the inscription of my stone document, let him listen to (or obey) my exalted words, and may my stone document enlighten him with regard to his law-suit and may he understand his case. Let his heart be made easy (so that he says) "Hammurabi is truly a regent who is like a father to his people. He has listened with reverence to the words of Marduk, his lord, he has won victories for Marduk in the north and the south, he has gladdened the heart of Marduk his lord, he has for all time secured the welfare of the people and given the country a just rule."¹

The Susa text comprises 49 columns or rows, a lacuna the size of which is about 5 columns being its only defect; it is written in Babylonian Akkadian and is extraordinarily well preserved. "When Marduk sent me to reign over mankind and restore the country I laid justice and order in the mouth of the country . . .",² that is to say, my rules of law, written below were composed in the language spoken in the country. The Law of the Land, as we know it, comprises a Preamble, an Epilogue, and between these a long series of provisions, the number of which, excluding lacunae, amounts to 282 clauses or paragraphs. Just after the laws we read, as the first words of the Epilogue, the following, which may be regarded as a kind of superscription for the whole text: "The just laws (*di-na-a-al mi-ša-ri-im*) which Hammurabi the wise king has laid down, (literally: announced and demanded to be obeyed absolutely), and who has given the country just help and a good government, Hammurabi, the perfect (?) king, am I."³ From this and from the previous quotation from the Code of Hammurabi, it appears that the king was the legislator, that he had caused the Law of the Land to be written down for the information and enlightenment of all, and that by his "stone document" (*na-ru-um*) he makes public the contents of the law and demands that it be kept.

Hammurabi's law is purely secular as regards its contents, it is a civic law; but its genesis too is due to the king alone. The famous relief on the upper part of the stela where Hammurabi is seen standing before the throne of the god Shamash, while the seated deity hands him a stylus (?), must not be interpreted to mean that Shamash

¹ Cod. Hamm. XLI 3-39.

² *Ibid.* V 14-23.

³ *Ibid.* XLI 1-10.

dictates the laws to him. This deity was originally a god of fertility with the power of the sun in him, worshipped locally especially in Sippar and Larsa, but in the Babylonian pantheon he became the god of the sun, and at the same time the god of justice, since the sun is in the sky as long as men are awake, and sees all their actions, a way of thinking we meet with in several places in religious history. Perhaps this linking up of the sun and the maintenance of justice indicates the awaking of conscience in the urban religion, but it is difficult to argue reasonably in such spheres since the gaps in our knowledge are so great. Shamash watches over the fulfilment of justice on this earth, and the relief in the Susa text represents Shamash charging Hammurabi with the task of enforcing the laws in the land. In the Epilogue we read: "I am Hammurabi, the king of justice (*šar mi-ša-ri-im*), whom Shamash has given the law (or the legal rules, *ki-na-tim*), my words are choice, my actions are beyond compare."¹ Here the context, in which Hammurabi's words, i.e. his legal rules, are coupled with the fact that Shamash has given over the law to him, shows that the king, by means of his legal rules, in the place of Shamash, is to see justice and order preserved in the country.

As will appear from the Epilogue, it was Hammurabi's view that through his legislation for the realm he had created legal rules of a general and eternally valid character. "In the days to come, for all time in the future, may the king who is (then) in the country watch over (or attend to) the words of justice (*a-wa-a-at mi-ša-ri-im*) that I have written on my stone document (*na-ru-ia*), let him not change the law of the land which I have legalised, nor the decisions I have taken . . . If that man has wisdom and will guide his country aright, then let him attend to the words that I have written on my stone document. And may this stone document enlighten him as to the (kingship's) way and government, the law of the land that I have legalised and the decisions of the land which I have taken. And let him guide rightly the black-headed people (i.e. the Babylonian Semites who in contrast with the close-shaven Sumerians did not shave their heads), let him judge (according to) the law and make decisions (in accordance herewith). Let him root out the wicked man and the evil-doer from his land, let him promote the welfare

¹ Cod. Hamm. XLI 95-102.

of the people.¹ Thus it was not only Hammurabi's wish to collect and equalise the transmitted Babylonian customary law, which of course had local deviations, so as to give his empire a uniform law, but he also regarded his law as having exhausted all juridical possibilities, so that posterity would have nothing to add or take away. A fact of decisive importance for the survival of the law was that the structure of the Babylonian community underwent little change during the more than 1200 years that passed from Hammurabi's death in 1750 till Babylon's fall in 538 B.C.. But the fact that the Assyrians made their own laws and later became the dominant people in Mesopotamia probably in some degree restricted the juridical scope of Hammurabi's Code.

Of course the principle applied to the arrangement of the individual legal provisions of Hammurabi's Code is of another character than the European, but it is certain that the individual laws were deliberately grouped together, and large groups of clearly segregated legal rules can be set apart, e.g. groups relating to agriculture and commerce (§§ 42-107; perhaps the laws relating to trade and commerce were more comprehensive, §§ 66-99 having been lost); civic life and family life (§§ 127-194), the apportionment of punishment (§§ 195-227); prices and leases (§§ 241-77), and provisions relating to slaves (§§ 278-82). The abundance of the subject matter is overwhelming, and through the brief decisions of the legal provisions we envisage a world which gives us a highly valuable insight into the daily life and doings of the Babylonians in so far as a regulation by law of the mutual relations of the citizens was required. Below I will try to give an account, in very broad features, of Hammurabi's Code as a juridical document, and describe more comprehensively the knowledge we can gather from the dry words of the laws of certain aspects of the daily doings and private life of the Babylonians.

§ 6. The first five clauses bear no relation to each other but all refer to the legal procedure in the courts, the prosecutor, witnesses, and judge being mentioned. In general it held good that no person could prosecute another person for a crime entailing capital punishment, unless he could prove his accusation. In the opposite case the prosecutor was liable to death himself. Special rules applied when the

¹ Cod. Hamm. NLI 59-94.

charge included magic and sorcery; here it was difficult to procure evidence and an ordeal by water was employed as the decisive proof; if the result went against the prosecutor, the defendant not being drowned, the prosecutor incurred the death penalty and the defendant also obtained the proprietary right of the prosecutor's house. In cases of false or worthless evidence the witnesses were punished by death, whereas the witness who had allowed himself to be bribed with corn or silver incurred the penalty apportioned in the case. To the judges it applied that when they had taken a decision, and passed sentence in accordance with it, signed it and sealed the document, the sentence could not be set aside. The judge who did so had to pay a penalty of 12 times the punishment apportioned by the sentence, and in the court (*puḫru*) he was to be dismissed from the judgment seat (*kussû*), to which he was never later allowed to return: "and in a law-suit he shall no longer take his seat among the judges."

It is on purpose that these five clauses precede the law itself; the law, as we shall see, is concerned, in its succeeding 277 clauses, with all conceivable relationships in the daily life of the Babylonians and fixes the judgments to be passed in the individual cases whether these refer to military service, agriculture, commerce, family life or the slaves. The verdicts of the law express the king's absolute will, but even though the citizens' right of appeal has been established through the king's correspondence, the legal security of the citizens rests first and last on the wording of the five above-mentioned clauses. The local courts must be presided over by incorruptible judges whom no favours or gifts would induce to change their judgment. Dismissal from office and a twelvefold fine paid into the treasury was the punishment for abuse of official power. But moreover, since every sentence passed was a result of the evidence brought forward and deposed by the witnesses, the highest integrity was demanded both of the prosecutor and the witnesses; false or unproved charges as well as false evidence were punished by the death penalty, while bribed witnesses only incurred the punishment apportioned. These severe measures had partly the effect of checking ill-timed litigiousness and the quarrelsomeness of habitual complainers, but partly also, and especially, they created a feeling of security in the citizens as regards the courts and the legal procedure. Absolutely convincing arguments and veracious evidence must be the basis of every sentence passed. And it is understood as a

matter of course that this applies to all the decisions in the following 277 clauses.

§ 7. Clauses 6–25 refer to various forms of abuse of proprietary rights; it is not without interest to note that these provisions come at the very beginning of the Code just after the general rules for legal procedure, since, as we have already stated, private property, precisely in the 1. Babylonian Dynasty, was one of the constituent elements of the community after the extraordinary extension of private ownership which took place in the Isin-Larsa Period when the Sumerians were ousted by the Semitic Babylonians. Theft of temple or palace property entailed death on capture, likewise receiving of stolen goods from these two public sources. On the other hand, theft of farm animals or ships (boats) from the same two aforesaid institutions is punished by fines. An *awilum* therefore is liable to pay 30 times the value of the stolen thing, while a *muškēnum* is let off with a compensation 10 times the value. This fact which we meet again and again in the Code of Hammurabi and which will only be pointed out this once, gives social expression partly to the difference in income of the landowners and the landless free men whose working power is for sale, partly to the larger demands society makes on its best men.

Unlawful handling of property found was a very grave affair, as appears from Clause 9: "If a man who has lost something finds the thing he has lost in another man's possession and the man in whose possession the lost object is found says, 'it was sold to me, I bought it in the presence of witnesses,' and the owner of the lost object says, 'I will bring witnesses who can identify my lost property,' if then the purchaser brings forward the seller who has sold it to him, and the witnesses in whose presence he has bought it, and the owner of the lost object brings forward witnesses to identify his lost property, then the judges shall consider their evidence. The witnesses in whose presence the purchase was made, and the witnesses to identify the lost object are to give their evidence before the god (*ma-har i-lim*). The seller shall be executed as a thief, the owner of the lost object shall have it restored to him, the purchaser shall receive from the seller's estate as much silver as he himself paid (the latter)."

This example clearly illustrates the legal procedure in court in all its details, we likewise see that the evidence is given on oath before

the image of the god; whether there was such an image in the courtroom (*puḫru*) or whether the witnesses were taken to the temple, we do not know. However, there is more to come about the unlawful handling of property found; there is yet another possibility. Clause 10 runs as follows: "If the purchaser does not bring forward the seller who sold it to him, nor the witnesses in whose presence he bought it, and if the owner of the lost object brings forward witnesses for the identification of his lost property then the purchaser shall be executed as a thief, the lost object shall be restored to the owner." It is seen how in both cases evidence on oath is of decisive importance for the sentence.

Those cases have been considered in which for reasons unknown to us one of the parties to a lawsuit is unable to summon witnesses in court. If the judges (*da-a-a-nū*) think that these witnesses are unavoidably absent and that the man's case is of a substantial character they shall adjourn the case for 6 months (§ 13) which is the last respite that is given.

Burglary and robbery were punished with death. "But if the robber is not caught, the man (here as elsewhere where I say nothing to the contrary the text has the word *awilum*) who has been robbed shall, in the presence of the god, give a specified account of his loss, and the city and its governor (*ra-bi-a-nu-um*) on whose land and boundary the robbery has been committed shall give him compensation for all that he has lost" (§ 23). If a human life is lost during the robbery, the city and its governor shall pay that man's heirs 1 silver *mana* (§ 24) which corresponds approximately to $\frac{1}{2}$ kg. Here we have a clear case of a kind of municipal care, at the command of the head of the state, for persons who have suffered damage.

The idea "opportunity makes the thief" was known to the Babylonians too, and such theft was punished with special severity if the robbed person was in a particularly difficult situation. "If a fire breaks out in a man's house and an (other) man who goes to put it out casts his eye on a piece of furniture in the owner's house and removes this piece of furniture from the owner's house, such a man shall be cast into the fire that is burning" (§ 25).

Finally we shall mention a number of offences which are all punishable by death: stealing a man's son while he is a child; helping palace slaves or slaves belonging to a *muškēnum* to escape out of town, or

hiding them in one's house. Special steps were taken if a man seized a runaway slave in the field (§§ 17-20). If the captor knew the slave's master he was to restore him to his owner who was to pay his captor 2 shekel (*šiklu*) *kaspim* (silver) as a reward; 1 shekel is 8.4 gr. But if the slave refused to mention his master's name, the apprehender was to take him to the palace, from which further investigations were to be conducted until the owner was found; conversely the apprehender who took the slave home to his own house to employ him or her there was to suffer death; this was unlawful handling of property found (cp. § 9). "If the slave escapes from the hand of his captor the latter shall be free, if he declares this to the slave's owner on oath (*ni-iš i-lim*) (§ 20).

§ 8. The provisions concerning compulsory enlistment which enter into what we might call the Military Law (§§ 26-41) have been already mentioned in this chapter's § 2. What is otherwise of interest in this group of statutes is especially the circumstance that plots of land were allotted to officers of the army in virtue of their military rank; this also applies to other state officials such as a *na-ši billim*; the expression is ambiguous since it generally means: "those who are liable to pay taxes", but in § 38 it is mentioned on a line with two degrees of officers (perhaps non-commissioned officers) and probably means "tax-collector". The officers' plots of land were state property: "An officer, a *bā'irum* (p. 517) or a *na-ši billim* must not convey to his wife or daughter the field, garden or house which is his fief (*ilku*), nor may he transfer to them debts (incumbent on the feudal property)" (§ 38).

To understand the central administration it is important to keep in mind the term *ilku* which we have rendered as "fief" but which literally means "official service, business". We have mentioned that we are unable to estimate the size of Hammurabi's army, but the great victories from the last 13 years of his reign would seem to indicate that the corps of officers was not small. But this again implies that the state domains, which inter alia according to clause 38 of the Code were used to pay the officers in the form of *ilku*, i.e. as their fief instead of silver or payment in kind, must have been of a considerable size. Here Hammurabi evidently continued a tradition from the time of the Ur III Dynasty. In addition to his own very extensive private estates which were managed by special officials, he also had control of a con-

siderable part of the land of the country as state domains. We recall that the large stores of the state kept near Nippur in the Ur III Period served similar purposes.

§ 9. The keeping of the agricultural laws (§§ 42–65) was of course of the greatest importance for the whole welfare of the empire which depended on abundant crops, used *inter alia* for export in order to procure vitally necessary raw materials (stone, timber, and metals) for the home country. This group of statutes is highly specialised, the king having tried to consider every conceivable problem connected with agricultural and horticultural work. Unfortunately the only lacuna in the law text occurs in this place. But from the laws which are left we see partly that Hammurabi's troubles refer in the main to neglect of the cultivation of the fields and of the canal system, partly that the farming had chiefly been carried on by tenants who were responsible to the landlords. The tenants were recruited from two different strata of the community; sometimes we hear of an *awflum*, sometimes of *ir-ri-šum*. The latter term is used of the propertyless, the man without means, at all events about a person who is not a freeholder; it covers our idea of a tenant. On the other hand, it is remarkable that even persons of the land-owning class, *awilû*, appear as tenants; it is expressly mentioned that they are responsible to *be-el eḫlim*, the owner of the field; but we may perhaps conjecture that these tenants were younger sons of small landowning *awilû*.

It was in the first place the duty of the tenant to grow corn in the field he had taken over. If he had not tilled it properly or grown other crops than corn, he was to pay the owner a fine of corn in proportion to the neighbour's harvest, the values of neighbouring plots of land being parallelised (§ 43). But if the tenant did not cultivate the field at all, he must, besides paying a fine of corn in proportion to the value of the neighbour's crop, also plough or harrow and sow the field and then without enjoying the fruits of his work return the land to its owner (§ 44). A tenant might also take over an untilled plot of land on a three year lease but if he did not grow anything within this period he was liable to pay the owner in the fourth year, 1210 litres of corn for each 65 hectares of land he had rented, and in addition to have the land harrowed and treated, but without sowing it, and thus return it to the owner (§ 44).

To convey an impression of the dues which a tenant usually had to pay the landowner we quote here the wording of a contract from the reign of Ammi-ditana (1683-1647), this king being the third after Hammurabi in the series of rulers of the 1. Babylonian Dynasty. "7 *ikû* of field, part of the 9 *ikû* belonging to the Shamash priestess Ina-libbi-ershet, the daughter of Warad-ilishu, has been leased by Idin-Zababa, (who is) *bâ'irum*, for 1 year to sow, from Ina-libbi-ershet, the owner of the field (area). At harvest time he is to deliver, in the gateway to the dwelling of the Shamash priestess corn to the measure of $\frac{2}{3}$ *kur* per *ikû* of land. At 3 of the (Shamash) feasts he is also to deliver 20 *sila* of spirits, 5 *sila* of bread, and 1 piece of meat."¹ As an estimate of the amount due it may be said that one *ikû* corresponds to circa 3529 sq.m., one *kur* to 121 litres, and one *sila* to 0.4 litre.

In our first chapter we mentioned in connection with the canal construction the exceedingly important work of building dams (*kârû*) by which the relation between the water level of the canal and the level of the fields was regulated. The man, whether he were a freeholder or a leaseholder, who did not inspect and keep his dam in repair so that it broke down and the fields of other owners were flooded, had to pay damages for the crops destroyed (§ 53). "But if he be not able to make good the corn, he and his personal goods (*bîšu*) shall be given for silver (i.e. shall be sold) and the farmers whose corn the water swept away shall divide (the proceeds of the sale)" (§ 54). Here we are confronted with one of the cases which we mentioned above, where an *awîlum* is made a slave because he is unable to pay.

When the warm season came the farmer, as we likewise saw in Chapter I, must see that the water was led to the areas which would suffer first from the drought, but he must remember that the winter rains in November would bring about a small rise in the level of the canals. He must therefore be cautious when he "opened" a way for the water in its reservoirs at the time when it was to be used for irrigation. Negligence here might be fatal to the neighbour's field, and if the latter was flooded by his water masses he was to pay 1210 litres of corn as a fine for each 65 hectares of ruined land. This compensation was to be paid whether his neighbour's land were cultivated or uncultivated (§§ 55-56).

Similar rules applied to gardeners who had been hired by landowners

¹ Bu 91-5-9, 764 (CT VIII (1899), Pl. 40).

(§§ 62-63, 65) in the case of negligence which diminished the productive capacity of the gardens. Of the terms of the contract, otherwise rarely mentioned in the Code of Hammurabi, for a tenant as gardener we hear in § 64: "If a man farm out his tree and fruit-garden (*kirû*) to a gardener, the gardener shall give the owner of the garden $\frac{2}{3}$ of the produce of the garden for as long as he has the garden; he himself shall take one third." The tenant was not allowed to cut down trees on the owner's (*be-el kirim*) property of his own accord. If nevertheless he did so he was to pay a compensation of $\frac{1}{2}$ *mana* (= $\frac{1}{4}$ kg.) of silver (§ 59).

While, as we have seen, sloth and negligence of all kinds are severely punished under the law the case is quite different when there is damage caused by storm, or floods due to natural causes and not to negligence. Thus § 48 reads as follows: "If a man be in debt and Adad (i.e. the storm god) floods his field and sweeps away his produce or if, owing to lack of water, no corn has grown in the field, in that year he shall deliver no corn to his creditor (*be-el hu-bu-ul-li*), his contract shall be altered, and he shall pay no interest (*šibtu*) for that year." It does not appear from the clause whether it relates to the tenants or the freeholders, but I take it for granted that the rule applies to both.

§ 10. What is left of commercial law is mainly concerned with the relation of the merchant (*tamqarum*) to the *šamallû*. The latter must be regarded as a retailer, a large merchant employing several such either as travellers or with a fixed habitation as a kind of agents. § 104 inculcates the use of a written receipt in every settlement of accounts between merchant and agent: "If a merchant supplies corn, wool, oil, or goods of every kind for selling, the agent shall write down the value and return (the receipt) to the merchant. The agent shall have a sealed receipt for the money he gives to the merchant." A written receipt seems in all circumstances to have been the basis of judicial decisions in lawsuits between merchants and agents, buyers and sellers. Thus we read: "If an agent is negligent and does not take a receipt for the silver he has given the merchant, the silver for which there is no receipt shall not be placed to his (the merchant's) account." (§ 105). The case is also mentioned (§ 106) in which the merchant and the agent in the absence of a receipt disagree as to whether or not the agent had received silver from him. "The merchant shall call the agent to account in the presence of the god and witnesses as regards the silver he (i.e. the agent) has

received, and the agent shall pay the merchant three times the amount he has received." In the opposite case, when the agent is able to prove by oath and the testimony of witnesses that he has returned to the merchant the silver he has received from the latter, the merchant must pay as a fine to the agent an amount 6 times as large as the amount lent but long since returned. Here again we see how a rich and distinguished man is punished twice as severely as a man in humble circumstances.

§ 11. It is in good agreement with the part played by ale- and wine-houses in the daily life of Babylonia that the Code of Hammurabi, in a special group of legal rules (§§ 108–111), tries to regulate their position. Unfortunately on some few points it is not clear how they should be interpreted. It appears with all clarity that the person who owns, runs, or manages a tavern is a woman, and there seems to be a century-old tradition for this already in the time of Hammurabi, since the Dynastic Lists from the Isin-Larsa Period previously mentioned (Chapter IX § 9) state that the founder of the Kish III Dynasty Queen Kug-Baba (c. 2369 B.C.) originally ran a wine-house. Further we see that the government did not wish that the wine-seller's house should be the rallying place of lawless ruffians, but if such obtained shelter and entertainment with her without her notifying the police she was to be punished with death (§ 109). A priestess was liable to the same penalty (i.e. those who had not their fixed habitation within the temple complex), if she opened and ran a wineshop, or if she visited a wine-house (§ 110). This would seem to show that women often visited wine-houses, and that this group of women only were not permitted to enter. Further we notice that the manner of death is for the first time specified here: the priestess is to be burned. We recall that in § 25 we encountered the same form of death penalty, but there it was not unconnected with the fact that the theft had been committed in a burning house. In all other statutes preceding the licencing laws only the death penalty is mentioned without any further specification, as in § 109: "this wine seller shall be killed." In § 108 too the manner of death is specified; the woman who owns the wine-house is to be flung into the water and so suffer death by drowning, so far as I can see for reasons connected with her occupation. Two crimes are mentioned, in the first place taking or receiving or demanding silver weighed on "the large balance"

in payment for wine or beer instead of corn. In the preceding part we have seen again and again that corn is the standard value used in different measures for dues, payments, fines, and altogether the most important legal tender, whereas silver, which might with some justification be translated in the sense of our "money" and which was an imported article, could not originally for very good reasons be a standard of value in Babylonia.

Perhaps the fact that the king enjoined death by drowning for women selling wine who demanded or received silver in payment instead of corn reveals partly that silver was a rare and valuable tender partly that the taverns were always full of customers, so that the turnover in wine and ale-houses throughout the country was exceedingly large all the year round. But the same penalty was applied to the woman owning the tavern if she charged excessive prices by serving a smaller measure of the desired drink than the measure of corn she received. Thus I interpret § 108 in conjunction with § 111, which unfortunately contains words that are difficult to interpret. But this would seem to be the meaning of the last-mentioned clause; in this it is laid down that if a woman selling wine has delivered 60 *ka* (a measure of capacity) of liquids on credit she is to receive 50 *ka* of corn in payment when the crops are harvested. The severe penalty for charging excess prices, for cheating the customers, is only understandable when viewed in relation to the very great custom of the taverns.

§ 12. Provisions relating to debts and deposits (property in trust) are found in §§ 112-126. Here it is laid down that one must never commit property to the charge of others, whether it be gold, silver or anything else except in the presence of witnesses and accompanied by a contract; if these precautionary measures were omitted the depositor could not take action (pl. *rugummû*, complaint). But if the person who had received a deposit in the presence of witnesses nevertheless denied having received it, the judges were to call him to account, and he was to render double the amount that the depositor had deposited with him (§§ 122-24). If on the other hand, burglary and theft had diminished the deposit the recipient need only compensate the depositor for the loss and must see that the police authorities hunted down the thief in order to receive compensation himself by the return of the stolen goods (§ 125). But if the recipient feigned loss of the deposit and even

claimed compensation he must swear to his cause; the penalty for a false claim was to pay double the sum of the feigned loss (§ 126).

Debt (*ehiltum*) was to be paid back, but self-help on the part of the creditor by encroachments on the debtor's produce was forbidden without the debtor's permission (§ 113); if, however, the debtor possessed nothing of value the creditor might imprison him. Here is a difficult problem, but from § 115 it would seem clear that the compulsory confinement took place in the creditor's house. We know that slaves could be sentenced to imprisonment for small offences, when flogging or cutting off the ears was considered too severe, but here we may suppose it was a temporary confinement in the slave-owner's house. We also possess a passionate letter in which a condemned person mentions that the king, though he has given him his life, has instead had him sent to prison despite his innocence. The complainant says that he does not want to starve in his prison, but it is difficult to get to the bottom of the matter. We are uncertain as to the meaning of the word prison, which should here perhaps be taken in a metaphorical sense (80-7-19, 40, Rev. 7 ff: Harper V (1900), No. 530).

A debt could be settled by slavery in case the debtor had no means of paying, as we saw above, but no matter what was the amount of the debt 3 years' work on the part of the debtor to compensate the creditor was the maximum, according to § 117. The cases in which a debtor, in order to settle his debts, sold or made over to the creditor for a shorter or longer period part of his own slave-holding were probably more frequent. Here the rule held good that the creditor could sell such a slave or slave woman consigned to him without any possibility of complaint. Conversely, a debtor had no right to settle his debts by selling a slave woman who had borne him children. "The owner of the slave woman shall pay back the silver paid to him by the merchant, and he shall redeem his slave woman." (§ 119).

§ 13. Family law (§§ 127-194) characteristically enough is preceded by a clause imposing a penalty for slander and defamation which in all times have served to create disturbance and break up marriages. "If a man slanders (lit. points his finger at, *u-ba-nam u-ša-at-ri-iš-ma e-li*), a priestess or another man's wife, and he cannot prove it, that man shall be brought before the judges and they shall cut off his front hair" (§ 127). Then follow a series of provisions concerning the

marriage relation; this was to be legalised by a written contract in order to be valid (§ 128). Adultery was punished, if the perpetrator was caught in flagranti, with death by drowning for both parties, but the deceived husband might step in to save his wife's life, while the king could save the life of the lover, the latter being his subject (§ 129). Rape perpetrated against another man's betrothed who was still in her father's house was punished by death, whereas no charge was made against the young woman (§ 130).

From these legal rules it appears with all plainness that marriage was monogamous, and that all sexual intercourse outside marriage, whether with willing or unwilling women, was forbidden to the husband, while conversely the same rule applied to the wife. Sexual infidelity was punished by death from the moment of marriage. Now we can better understand the slander clause to which the legislator returns in §§ 131-32, where we hear of slander and defamation as causes of marital quarrels. "If a man accuses his wife but she has not been caught lying with another man, she shall swear with solemn rites (lit. speak raising her hand to the god, *ni-iš i-lim i-za-kar-ma*), and (after thus having cleared herself) return to her house" (§ 151). And "If a wife has been slandered because of another man, but she has not been caught lying with another man, she shall for her husband's sake throw herself into the water (i.e. suffer the ordeal by water)" (§ 132).

The two last-mentioned clauses are instructive; none of the instances are in flagranti cases, so proof and evidence cannot be brought before the magistrates. But while in that case it is incumbent on the accused to clear herself by oath, we do not see that any penalty is imposed on those who made the false accusation. In § 1, as we saw, the death penalty was imposed for a false charge in the case of an accusation for crime, while § 127, by the dishonouring cutting of the front hair, marked the malicious backbiter in the eyes of the public. Otherwise in marriage. Here the husband might accuse his wife without being affected when she had cleared herself; indeed, the husband's accusation was put on a level, legally, with the neighbours' and other people's gossip, which the wife must try to disprove by voluntarily suffering the ordeal by water, which had the character of a judgment of God since she was innocent if she could float; if she sank she was guilty and was punished by death. If we consider these two clauses in com-

bination with the circumstance that there were no legal rules by which the wife could accuse her husband of infidelity, we realise that the law afforded most protection to the husband in marriage.

This fact must not make us forget that Hammurabi's ideal was to prevent the strong from oppressing the weak and to see justice done to orphans and widows. And in §§ 148-49 we have the finest proof of how a sick wife was safeguarded by the law: "If a man takes a wife and she falls ill, and if he then intends to take another (wife), he is permitted to do so. His wife who is ill he shall not repudiate, she shall remain in the house he has built and he shall keep her as long as she lives". "But if this woman does not choose to remain in her husband's house, then he shall pay out to her the dowry she brought from her father's house and it is permitted to her to leave (her husband and his house)".

The wife's dowry is mentioned again and again in the Code of Hammurabi, and we may therefore consider it a fixed institution that she brings it to her husband's house. The sick wife's right to a divorce if she wishes it, is laid down in § 149 of the law, but in addition a healthy wife could claim a divorce in 4-5 cases. This is a very interesting fact to note and testifies to the high legal standard of the Code of Hammurabi, which in this particular is a great contrast to the Mosaic law, early Greek law, and Roman law, these being merely interested in the husband's right to divorce. And it must not be forgotten that marriage, before the victory of Christianity, in the East as well as the West, made it a sacred rite, was throughout a purely secular affair, which, even though legalised, retained the character of a purchase by virtue of the dowry institution.

The first instance dealt with is when the husband had been captured in a foreign country. "If there are in his house means of support (for his wife and children, if any), and his wife leaves the house, she shall protect her body and not enter another house" (§ 133). If nevertheless she had sexual intercourse with another she was to be held responsible and die by drowning (§ 133 A). But if the captive husband's house had no means for her support, she was not to be blamed if she celebrated coitus with another man (§ 134), she might even go openly to another man's house and bear children (to this other man). "But if her first husband later returns and comes to his city, then this woman shall return to her husband, and the children (conceived and born

during his absence) shall go to their (real) father" (§ 135). Of course it can be juridically disputed whether this form of legalised infidelity can be regarded as a divorce, but we must remember that § 127 fixes death by drowning as the penalty for both the parties involved in adultery.

In the second case, on the other hand, there is no room for doubt. "If a man deserts from his city and escapes and his wife goes to the house of another, if that man returns and wants to take back his wife, then the fugitive's wife shall not return to her husband because he hated his town and fled" (§ 135). Here there is no question of whether there were means for the maintenance of the wife as in the first instance, but this is no doubt because in the first case the soldier was prevented from returning to his house and home as a result of the general summons to arms which he obeyed, whereas in the second case the husband voluntarily deserted his home.

In the first two cases the wife's right to a divorce was due to external circumstances that had not actually anything to do with the marriage of the parties; her husband was taken prisoner during a campaign or for reasons unknown to us fled from his house and town. The third case, on the other hand, occurred when the husband discontinued marital relations with his wife. "If a man feels inclined to (lit. sets his face to) repudiate a concubine (*šuglūm*), who has borne him children, or a wife who has given children, then he shall give back to this woman her dowry and give her an income from field, garden, and movables, and she shall support the children while they are growing up. When her children have grown up they shall give her out of what is given to them, a portion corresponding to a son's, and the man who is to her taste, may marry her". (§ 137). And the same rule held good for the returning of the dowry (*šerikūm*) and the breaking up of the marriage if the wife had borne no children to the man who repudiated her (§ 138); if the wife had been obtained without payment of any bride purchase price (*tirḫātum*), an *awilum* had to pay her 1, a *muškēnum* $\frac{1}{3}$, *mana* of silver as divorcement money (*uzubbūm*) (§§ 139–140). Here is something that is not quite clear to us as the finer shades of difference between *šerikūm* and *tirḫātum* escape us.

It is quite another matter of course if the wife neglects her household, goes about, out of doors, making herself ridiculous, and thus disgraces her husband. Such a wife shall be called to account by the

judges. "If her husband says, I have repudiated her, he shall let her go (as she pleases). Upon her departure nothing shall be given her as divorce money. If, on the other hand, her husband says, I have not repudiated her, then her husband is allowed to take another woman (to wife). The first woman shall remain in her husband's house as a slave" (§ 141). It is interesting that the law here shows us one more chance of divorce which is the result of the husband's loathing of a disorderly tattling female. This is not a case of adultery, for the death penalty was enforced for that, as we saw in § 129, but it may be permitted to doubt whether this form of divorce was very often practised.

The last cause for divorce found in the Code of Hammurabi is identical with the third in so far as the discontinuance of marital relations is the cause, in this case because the wife refuses her husband his marital rights. "If a woman hate her husband and say to him, you shall not take me (i. e. have sexual intercourse with me), then they (i. e. the judges) shall enquire closely into her previous faults, and if she has been a careful manager of the household which is without spot or flaw, and her husband has gone about (to other women?) and has disgraced her in the highest degree, then this wife is without guilt. She shall receive her dowry and go to her father's house" (§ 142).¹ Here the implication is that the wife is a clever housewife, blameless in her conduct to other men, and the husband a rake, but nevertheless this provision may be termed the most liberal divorce provision ever known, since the husband's consent to the breaking up of the marriage is not required. On the other hand, the woman who is a bad housewife, runs about the town and neglects her household duties, and at the same time denies sensual gratification to her husband, suffers an ill fate; the judges must let her die by drowning (§ 143).

One more case must be referred to before we conclude this survey of the marriage law. As previously stated, marriage was monogamous with the husband and wife (*aššatum*) and the children, if any, as the main pillars. Secondary are *amtum*, the slave woman and *šugitum*, the concubine, and the Code of Hammurabi has attempted to regulate the husband's relation to these by some legal provisions (§§ 144-147). The truth of the good old saying, "One gets tired of one kind of wife and one kind of food" has been experienced with more or less bitterness

¹ As for another sense of § 142, see G. Dossin, *RA* XLII (1948), pp. 113-24.

by the males of this world in all ages and in all countries, but in the oriental civilisations much was healed by the presence of the slave girls; they acted as a kind of safety valve for marital union. A wife could for many reasons, but especially if the marriage was childless, share her husband's love with a slave girl, but if the husband wished for a concubine besides his wedded wife it was quite a different matter. In juridical decisions concerning these complicated relations the deciding factor was whether the wife had given him children, either she herself or her slave woman with whom she had shared her husband's love.

"If a man takes a wife and this wife gives a slave girl to her husband, and she bears him children, if that man then desires to take a concubine they (the judges) shall not support him. He may not take a concubine to himself" (§ 144). But if the man's wife did not give him children, and did not share his love with a slave woman, and he desired a concubine, then he had the right to take one and let her stay in his house, but the concubine had not the same rank and rights as the wife (§ 145). These provisions did not apply to a slave girl given by the wife to her husband who had borne him children and whom the husband wished to give equal rank and rights with his wife; perhaps there were cases where the slave herself demanded this. The wife could not sell such a slave girl for silver but could continue to regard her as a slave in the house (§ 146); conversely, a slave woman who had been the husband's mistress could be sold for silver by the wife if the slave woman had borne no children (§ 147).

With respect to property the wife seems to have held an independent position; it appears from the above-mentioned laws of divorce that the marriage portion was the wife's personal property which was returned to her when the marriage was broken up. But at the death of the husband, too, she could take her dowry out of the estate (§§ 171-172). And the gifts given her by her husband were the wife's personal property by the contract. If a man gave his wife field, garden, house, or movables and delivered to her a sealed document for it, then her children after her husband's death could not make any claims against her. The mother was permitted to leave it after her death to her favourite child, but not to a brother (§ 150). On the other hand, we may take it for granted that the husband, as long as the marriage lasted, had the right to use the marriage portion.

§ 151 explicitly protects the wife's private property against the hus-

band's creditors and probably this private property included inter alia that *nudunnûm* which alone is mentioned in §§ 171–172 of the law, and which may perhaps have corresponded to the "morrowing gift" of the occident, the dowry being of course also juridically included in the wife's separate property; actually, however, the husband could command the use of the dowry. It is interesting to note that § 151 also protects the husband against the creditors with whom his wife has saddled herself before the marriage; only for such debts as both or one of the parties incurred after their union were they both responsible (§ 152).

The betrothal which preceded every marriage was of a binding character, because tangible realities were in question. The man brought his prospective father-in-law a gift (*biblum*), and an arrangement was made concerning *tirḥâtum* and the dowry. It is somewhat difficult to establish the precise difference between *biblum* and *tirḥâtum*. §§ 159–161 may be understood to mean that these terms denote the contributions of the suitor and the father-in-law respectively, but probably *biblum* is merely an earnest from the former of the larger bride purchase price, *tirḥâtum*, which in this way he pledges himself to pay the bride's father. If, however, before the marriage takes place, the suitor has cast his eyes on another woman and so says to the father of his first choice that he will not marry his daughter the latter may keep what the suitor, now turned cold, brought him as a gift (§ 159). But if, conversely, the father-in-law makes difficulties and refuses his daughter for whom the bride price has already been paid to his prospective son-in-law, then the father-in-law shall return to the suitor double the amount that he received from the latter (§ 160). If the father-in-law's refusal is due to his giving credence to slander coming from a friend of his prospective son-in-law, the father-in-law is likewise liable to pay the suitor double the amount of the bride purchase price and he is not permitted to give his daughter to the backbiting "friend" (§ 161).

The Code of Hammurabi does not specify the degree of relationship within which marriage is permitted, but in §§ 154–158 we find a series of provisions that aim at excluding what we call incest, a sexual relation between a man and a woman who are so closely related that the law prohibits marriage between them. It is not without interest that these provisions are grouped with the decree that the wife who caused her husband's death (inter alia by murder) was to be impaled (§ 153).

The penalty may surprise us, but as to the interdicts themselves there can be no doubt. "If a man has had sexual intercourse with (lit. has known, has experienced, *lamádu*) his daughter, they (the judges) shall banish him from the town" (§ 154), but if, on the other hand, a man after his father's death "lies in his mother's lap", the judges shall cause the son and mother to be burnt (§ 157). The case is otherwise if a deceased wife's sons are known to have had intercourse with one of their father's concubines (? *rabítum* lit. the eldest, of the highest standing; the wife?) who has borne children (to the deceased), "that man shall be denied admission to his father's house" (§ 158).

Further, a father who had arranged his son's betrothal (lit. selected the bride, *kallátam i-ši-ir-ma*) was forbidden "to lie in the betrothed girl's lap", but the penalty was different according as her betrothed had or had not first lain with her. In the first case she was the father's near kin as his daughter-in-law, it was then incest, and the father was to be bound and thrown into the water to die by drowning (§ 155); according to our views father and daughter are more nearly related but, as we saw, the penalty in § 154 was milder. In the second case the father was to pay as a fine $\frac{1}{2}$ *mana* of silver to the young girl and at the same time return to her, intact, what she had brought from her father's house, and "the bridegroom (*mutum*) of her heart's desire (*li-ib-bi-ša*) may marry her (*aḫázu*)" (§ 156).

It is important to note what these two clauses show us. The betrothed couple had sexual intercourse with each other; they lived in the young girl's father-in-law's house; and both these things happened before the marriage. The marriage portion does not seem to have been paid to the husband until the marriage was contracted, but already when she was betrothed the young girl brought something with her from her father's house (*mi-im-ma ša iš-tu bīt a-bi-ša ub-lam*). The young people's enjoyment of intercourse and their settlement in the prospective husband's father's or relatives' house before the wedding is an old-established custom in many parts of the world, even if the young couple does not settle in until after the marriage contract has been written. But the last part of § 156 is remarkable. It can of course be understood to mean that after the termination of the somewhat sordid affair with her father-in-law and after the latter has paid her a fine in silver, her betrothed can marry her without shame or guilt attaching to her. But the phrase "her heart's bridegroom" sounds very modern and is quite unusual

in the great law-book which never voices any emotional considerations. And if we are to keep to the wording it may mean that now she may herself choose her bridegroom, (supported by § 172 A), who in that case has the legal right to marry her in spite of her betrothal to another, that relation being suspended because it is not her intended husband but his father who has had sexual intercourse with her.

§ 14. The law of inheritance is intricate and comprises a large group of provisions (§§ 162–177). To these may be added the legal rule in § 150, according to which a widow shall retain the undivided estate of her husband as regards the gifts with which he has presented her by a sealed document when alive, whether they be fields, gardens, a house, or personal property.—But it should be noted that only gifts are referred to, not the testator's estate as a whole. The copiousness of detail marking the provisions of the law is partly connected with the enormous importance attached to private property in the Age of Hammurabi, partly with the fact that the dowry institution as well as the deceased husband's different kinds of children, begotten with the wife, the concubine, or the slave woman, complicated matters at the death of the testator or testatrix, the husband or wife.

Regulations concerning the dowry (*šeriklum*) mark the whole law of inheritance which as a matter of fact opens characteristically with the case of the death of a wife who has or has not left children; in the former case the deceased mother's father has no claim to the marriage portion, it belongs to her children (§ 162). But if the wife dies without leaving her husband any children and her father returns the bride-price (*tirhātum*) to the widower he has a right to the dowry: "her dowry then belongs to her father's house" (§ 163). A special case occurs when the father-in-law cannot or will not pay back the bride-price; in that case the widower is entitled to deduct a corresponding sum from the dowry before returning it to the fathers' house (§ 164).

It was possible for a father to give his favourite son a preferential position if in life he bequeathed to him by a sealed document his field, garden, or house, but the gift only became the son's property at the father's death, at which he also had the right to share the testator's personal property on an equal footing with his brothers (§ 165). If a man died before his youngest son had married, the latter was allowed to take as a preferential share of the estate an amount corresponding

to the bride-price which the testator had previously paid at the marriage of the elder brothers, and after that he and the others divided the estate on an equal footing (§ 166).

Only in extraordinary circumstances could a man disinherit a son. He could not say, "I will disinherit my son", without the judges closely examining the son's behaviour, and if the son had not committed a crime so great that his father could disown him, he could not be disinherited (§ 168). And even if he had committed a heinous crime (*arnum kabtum*) the judges were to let it pass unchallenged the first time it happened, but the second time the son committed such a crime the father had the right to disown his son and disinherit him (§ 169).

If the testator had been married twice and left two sets of children, the procedure was the same as regards the dowry whether the husband or the wife died. If a man had two legitimate wives in succession, who had both borne children to him, the children of both marriages divided their father's "goods and gold" at his death, while the children of the first and second marriages in addition received for division the dowries of their respective mothers which were never of the same size (§ 167). If a woman had been legally married twice, her children of the first and second marriage divided her dowry between them at her death (§ 173), but if she had not borne children to her second husband her dowry was returned at her death to the children of the first marriage (§ 174). From Clause 167 we also see that all the children, the unmarried daughters too, as must be emphasised since Clauses 165-166 only mention the brothers' share in the inheritance, shared equally the property left by their father; the married daughters did not inherit anything since they had received marriage portions.

In the provisions of Clauses 170-171 we see an attempt to regulate the proportional shares to be inherited by the children of the wife and of the slave woman (*mârê hi-ir-tim* and *mârê amtim*). If the father while alive had addressed (or referred to) the slave woman's children as *mârû-u-a*, "my children", and regarded them as being on an equal footing with the children of his legitimate wife, both sets of children were to share equally in the testator's property after their father's death, though the final addition, that the legitimate wife's children had the right to choose at the division of the estate, probably denotes a rather serious limitation to the provisions of this liberal clause (§ 170). The case was different, however, if the testator had not in life called the

slave woman's children his own, in that case they inherited nothing. To make up for this, the slave woman as well as her children were free from slavery (*andurâru*), and the legitimate wife's children had no right to exact work from the slave woman's children (§ 171).

The position of widows was safeguarded by the provisions of §§ 150, 171 (second half) and 172. Above we mentioned the widow's right to keep the gifts she had received from her husband in his lifetime, and it was stated that at her death she had the right to bequeath them to her favourite child (§ 150). Under § 171, she received as her property upon her husband's death her marriage portion and the above-mentioned gifts which were to be deeded to her in writing on a clay tablet (*i-na dub-bi-in*), as well as the proprietary right to her husband's house in which she could reside as long as she lived, though she must not sell it, "since after her death it belongs to her children" (§ 171). If she had not received any gift the judges, in addition to the dowry, allotted to her a portion of her husband's property equal to the share of a son, and if the children tried to turn her out of the house the judges were to enquire into her life and doings and give her permission to stay in the house if the children were proved wrong (§ 172). If a widow wished to marry again and left her house she was to make over to her grown up children the gift(s) she had received from her deceased husband and receive only the dowry from her father's house, "and the bridegroom of her heart's desire may marry her" (§ 172 A, cp. § 156).

A special instance occurred when a widow with young children wished "to enter another house"; only the judges could in that case give her permission to do so. They enquired closely into the circumstances of her deceased husband, then consigning to the widow and her second husband the administration of the children's father's property and estate after they had signed a clay tablet on which the transaction was inscribed. The newly married couple were not allowed to sell the property of the first husband and whoever bought anything belonging to the sons of a widow should forfeit his silver (§ 177). Here we see the king and his officials as wards of the children who obtain step-fathers by the second marriage of their mother.

The provisions relating to inheritance in the event of the daughter of an *awilum*, a country gentleman, marrying a slave are particularly interesting because they show quite unmistakably that such marriages did take place. They also lend support to our interpretation of the words

the "bridegroom of her heart's desire" in § 156 compared with § 172 A, as it is hardly possible to interpret such a union otherwise than as a love match on the part of the young girl, even though cases when hot blood has got her into trouble cannot be excluded. It is a minor problem why only palace slaves (sg. *warad êkallim*) and slaves serving a *muškênum* are mentioned, but not *warad awilim* (sg.), a gentleman's slaves. The children of a marriage between a slave and a landowner's daughter were protected by the law so that the slave's owner could not use and dispose of their labour as slaves (§ 175). In certain cases, but not all (cp. § 176 A), the wife might bring a dowry to this marriage; upon the death of the slave it was returned to the widow intact, whereas what he and she had acquired together in the course of the marriage was divided into two parts, the slave owner getting one half as his inheritance, while the other half went to the widow as her children's share (§ 176).

The tremendous importance attaching to the dowry in the Babylonian community appears plainly from §§ 178-184, in which a number of special cases are dealt with and legally interpreted, cases that juridically do not come within any of the preceding clauses in which the dowry institution is discussed. In addition to the legitimate wife, the main pillar of the community on the female side, there were large groups of women who took part in the numerous branches of the temple service. We have a number of terms for different kinds of female temple personnel, but we know very little indeed about the functions covered by these terms. Broadly it can be said, however, that the male priesthood being so specialised and its branches of office so comparatively well known to Assyriologists we shall hardly be far wrong in inferring that the female temple personnel in Babylonia was in the main associated with the fertility cult. Of this important aspect of Babylonian religion we shall hear more in Chapter XIII, here we shall merely mention that in addition to the female staff officiating at the dramatic performances, there were groups of women permanently associated with the *bît aššauimî*. This expression should not be rendered as "temple brothel" nor need we with Herodotus I 199 contemplate it with scandalised astonishment; in fact I think it will repay the trouble to view this ritual institution in its religious connection, which will be done in Chapter XIII. Here we merely refer in passing to these women's public functions in order to throw light on the provisions in Hammurabi's

Code relating to their dowry, since each of these women must in the course of nature have had a father and not a few of the practitioners of ritual love found their way into the haven of marriage. For the sake of completeness we may mention a third group of women within the Babylonian community; the very willing large-eyed girls with the clinging glance standing ready at street corners to serve Venus *vulgivaga* with their gorgeous bodies; we have also evidence that Babylonians married prostitutes, but about their dowries all the sources are silent.

The dowry which a priestess or *zinništum zikrum* (literally "a male woman"; does this mean a woman nubile or the like?) who belonged to the ritual love institution received from her father was of course legalised by being inscribed on a clay tablet, but if he had not written, "after her (decease) she may give (the dowry) to whom she pleases", then her brothers were entitled to take her field and garden at their father's death and give her as much corn, oil, and wool instead as corresponded to her share of the inheritance. But if her brothers did not do so, she might keep the field and gardens and allow a tenant (*irrišum*) to cultivate them for her; she could retain ownership until her death but she was not allowed to sell since her brothers were to inherit her property (§ 178). But if her father, in the written deed of gift, had given her the right to dispose freely of the field and garden after her death, she might when her father died give some or the whole of the gift to whom she pleased, and her brothers had no claim on her (§ 179). Thus the difference between a life interest and the proprietary right for this group of unmarried women in ritual offices depended on the formulation of the deed giving them their dowry.

The next case refers to a father not giving his daughter any dowry, whether she be a *kallātum* or a *zinništum zikrum*. The former term meant "bride" but it hardly denoted the young daughter who donned the bridal robe to become a legitimate wife, but was a ritual term the connotation of which eludes us. When the father died such a daughter was to receive from the testator's estate a share of the same size as that given to a son; after her death her share was to pass on to her brothers (§ 180). This clause, which we meet with again and again, implies that the inherited share was not silver or personal property, but consisted of fields, gardens or perhaps a house.

A *ḫadištum* and a *zēr mašītum* (lit. "the woman who forgets the sperm", a sterile woman?) occupied an inferior position. The former term

comprised all those who were engaged in ritual love; the father dedicated them to the temple service and evidently did not give them any preferential share for a dowry. At the death of the father they in fact only inherited what corresponded to $\frac{1}{3}$ of a son's portion, and at the daughter's death this was to be given back to her brothers (§ 181). The same share was inherited by a daughter who was given in marriage to the god Marduk (*aššatum*); if she had received no dowry she ritually went through the holy marriage ceremony with one of the priests; the only difference from *ḫadištum* and *zêr mašītum* was that after her death she could bequeath her portion to whom she pleased (§ 182).

Finally the case is discussed of the inheritance of the daughters who had been a man's concubines (*šugilû*). Such were often recruited from the social group who had been engaged in the temple service; if a woman of this class received a dowry from her father who took care that she should become the legitimate wife of a man and not merely his concubine, then she had no right to inherit at her father's death (§ 183). But if her father had not taken care that she was legally married and given her a dowry then her brothers were to give her a dowry after her father's death in proportion to their father's estate, and this also involved the duty of procuring a husband for her to replace the man whose concubine she had been (§ 184).

§ 15. The family law concludes with a series of provisions relating to adoption (§§ 185-194) which raise a number of problems we are not always able to solve. More particularly the special rules concerning adoption cause difficulty. In general it held good that he who "in his name" (*i-na me-e-šu*) adopted a young child as a son (*a-na ma-ru-tim*) and brought him up and supported him had a right to keep the adopted child for good (§ 185). What *ina mēšu*, "in his name", means we do not know. Perhaps there was a ceremony by which the little boy was made a member of his adoptive father's family. From § 190 it further appears that the adopted child was to be on an equal footing with the adoptive father's own sons. These two fundamental rules may have seemed ideal to Hammurabi for any kind of adoption, but the other laws relating to adoption show us that such a clear arrangement was not practicable, perhaps because the king was here trying to strike out on new lines not consistent with the current notions of adoption.

That adopted children were reclaimed is seen from two clauses strictly prohibiting the giving back of an adopted child. The children referred to are the sons of a minor official in the service of the council or of a *zinništum zikrum*. The motive may be the low rank of the latter but in that case we should here see a favouring of the strong at the expense of the weak, which would be quite contrary to the king's own words in the Epilogue. Perhaps, however, the reason is that both the real parents of the adopted child spend their lives in the main on the premises of the temple or the palace. A child, no matter who its father was, who had been adopted by an artisan (*mār ummānim*) who had taught it his trade could not be reclaimed by its parents (§ 188): this could only happen if the man had failed to train his adopted son (§ 189).

Depravity, ingratitude, and downright rebellion against the adoptive parents resulted in the adoptive son being turned out of his adoptive parents' house in order to return to his real father's home (§ 186). But if the son either of the above-mentioned minor official or of a temple "prostitute" behaved thus, he was, in addition, punished in the most brutal manner; his tongue was cut out (§ 192), one eye torn out (§ 193). Here we see quite clearly that Hammurabi did not manage to put adopted children on a equal footing with the adoptive parents' own children, for no parents inflicted corporal punishment on their own children even for their worst misdemeanours but merely disinherited them (cp. §§ 168–69). And a comparison of Clauses 186 and 192–193 confirms our suspicion that the humbler classes of society, though they had the same rights as others, were punished more severely in certain cases. That this was not the case with *awīlū* and *muškēnū*, the two main groups of free men in the community, does not affect our statement.

But finally it might happen that the adoptive father did not regard his adopted son as the equal of his own sons; in that case the son had the right to return to his real father's house (§ 190). And this also applied to instances in which the adoptive father repudiated the adopted son, but in that case the latter was to receive as his property one-third of the portion to which a son was entitled (by inheritance); fields, gardens, or houses must not be included in this third part, however (§ 191). This provision abundantly shows that Hammurabi was not able to put the adopted son on an equal footing with the

rest of the sons of the house; as we saw above, one-third is less than the Code mentions in the law of inheritance in the case of mixed marriages (a slave and a free woman), and is identical with what the temple "prostitute" and "Marduk's bride" receive from their father's estate (§§ 181-182), that is to say, one-third of a son's portion. The limitation for a repudiated adoptive child, that the portion must not include landed property, is also explicit.

The family law concludes with the story of the surreptitious child; the nurse (*mušēniktum*) who substituted another man's son for the child that died while under her care, without the consent of the dead child's parents, was entirely responsible, for such an act was a secret adoption of a stranger's son; the parents of the strange child, on the other hand, seem to be held blameless. The nurse's punishment was to have the breasts cut off (§ 194).

§ 16. By its nature this penal clause is inseparably bound up with the penal code, which immediately succeeds it (§§ 195-214) and, so far as the apportionment of punishment is concerned, is based on the law of retaliation (*lex talionis*). The idea of retribution required that if a crime were committed it should be punished by the same kind of punishment; if a man destroyed another man's eye, his own eye should be struck out (§ 196), if he broke another man's leg his own leg should be broken (§ 197). Further, if a man knocked out one of another man's teeth, a man who was his equal (*me-iḫ-ri-šu*), one of his own teeth was to be knocked out (§ 200), and again if a man struck another man's daughter and she died of the injury thus caused, his own daughter should be killed (§§ 209-10).

Special rules apply to *muškēnu*, the freemen owning no land, and to slaves, as well as to cases involving fighting and assault. For smart, pain, and molestation *muškēnu* received fines from the involuntary or voluntary perpetrator of the outrage, in which case the law of retaliation was suspended. Destroying the eye of a free man or breaking a bone in his body cost 1 *mana* of silver; to knock out one of his teeth $\frac{1}{3}$ *mana* of silver (§§ 198, 201); whereas if another man's slave was injured in his eyes or legs the perpetrator was to pay the slave owner half the price of the slave (§ 199). Very special rules regulated the apportionment of the penalty for blows, fighting, or assaults, but common to them all was the suspension of the law of

retaliation, except if a son struck his father, when his fingers were to be cut off (§ 195).

Striking a superior is taxed at 60 lashes in public (§ 202), for blows aimed at an equal the fine is 1 *mana* of silver (§ 203). In § 204 the reference is to two *muškēnū*; a free man being fined 10 shekel of silver for blows aimed at another free man. The modern equivalent of the two fines is as 500 gr. to 8.4 gr. of silver. Blows given during wrangling which resulted in injuries or wounds were not to be made the subject of regress if the perpetrator swore that he struck without intent, i.e. that the blow was unpremeditated, but the doctor's bill was to be paid by the assailant (§ 206). If the assaulted party died as a result of the fight the defendant was to swear that the blows were unpremeditated and then pay a fine of $\frac{1}{2}$ *mana* of silver (§ 207), but if a free man died from injuries received in such a fight the defendant need only pay a fine of $\frac{1}{3}$ *mana* of silver (§ 208).

It has often been pointed out in the preceding part that for crimes and misdemeanours free men paid smaller fines than an *awilum*, since the latter's responsibility to society and to its citizens was greater than that of a free man. But it cannot be denied that socially too a freeman was taxed lower than an *awilum*, and his assessment as a second class person appears clearly in the penal code wherever he or his house has suffered injury. This becomes strikingly evident if we compare §§ 209–10 with §§ 211–12. If a gentleman strikes another gentleman's daughter and thus inflicts molestation and injury on her he pays a fine of 10 shekel of silver, whereas a free man's daughter in the same situation only receives 5 shekel of silver. But if the young girl happens to die of her injuries the perpetrator's daughter shall in the first case pay with her life under the law of retaliation, whereas the life of a free man's daughter can be paid with $\frac{1}{2}$ *mana* of silver.

A free man of course ranks above a slave; how much, can be inferred from the rates of the fines, §§ 213–14 providing for the same problems which were dealt with in §§ 209–12 where the provisions applied to another gentleman's slave woman. If she suffered injury from the blow the perpetrator was to be fined two shekel of silver to be paid to her owner, while if death supervened he had to pay the latter $\frac{1}{3}$ *mana* of silver.

How absolutely a slave was set apart from the community may

be seen from § 205: "If a gentleman's slave strike a gentleman's son, they shall cut off his ear," for the penalty is brutal, painful, and a disgrace for all future, but it is no *lex talionis*, which would require that his hands or fingers should be cut off (cf. § 195). This is in the first place due to the fact that a slave never can pay eye for eye, being no man's equal, but partly also to the fact that a labourer without fingers is no labourer.

§ 17. In the succeeding large group of laws, §§ 215–277, we meet with the strange phenomenon that a regular wages law has been incorporated in a law code. Certain definite rates of pay for work done, as well as for the hiring of boats, asses, and oxen for agricultural purposes are fixed by law, each form of work being specified, a supplement to the penal code being often added, in which the penalty for badly done work is codified. The wages law is of the greatest interest to us because it gives us some knowledge of the standard of value at the time, but we get no further than to a comparison between tariffs and prices. It will give us an entirely wrong picture if we say that, as a Danish silver Krone, of blessed memory, weighed c. $7\frac{1}{2}$ gr., and a Babylonian *šiklu* (st. constr. *šikil*), shekel, weighed 8.4 gr., a shekel consequently corresponds to 1.12 Danish Kroner in 1910. But a comparison with the wages and prices of the Age of Hammurabi gives us good information of the value then ascribed to labour if it was not connected with slaves or all sorts of salable objects.

The responsible work of the physician, the fees for well done, the penalty for badly done, work, are dealt with in §§ 215–223. We see that operations were performed, and that boils in the region of the eyes were treated by surgical incisions, the instruments being of bronze. But we may refer the reader to Chapter XIV where Babylonian medicine will be discussed. The fee for a major operation (an open wound, an eye disease) was 10 shekel of silver (thus everywhere in the sequel where no nomination is given) in the case of a gentleman; a free man paid 5, a slave owner 2 shekel for operations on his slave. Setting a broken bone and restoring the patient's health, or medical (?) treatment of internal affections are rated for three socially distinct kinds of patients at 5, 3, and 2 shekel. If the operation on a gentleman was not successful, so that the patient died or

lost his eye, the surgeon's fingers were to be cut off; if a slave died after or during an operation the surgeon was to give the slave owner another slave of the same value; if the slave lost his eye the surgeon was to pay the owner half of the original purchase price by way of compensation. The fees of a veterinarian were on a much lower scale. A successful operation on an ox or an ass yielded a fee of $\frac{1}{4}$ shekel, but if it failed the veterinarian had to pay the owner $\frac{1}{4}$ of the value of the animal (§§ 224-225).

The responsibility of a builder (*bānūm*) was great, his pay for erecting and completing a house was 2 shekel for each 35 sq.m of ground covered by the entire block of buildings (? perhaps this figure includes the dimensions of the walls, the measurements of the roof etc.) (§ 228). But if the work was badly done and the house collapsed the builder was responsible for the damage done. If the owner of the house died when it collapsed, the builder too, by the law of retaliation, must lose his life (§ 229). If the owner's son died the builder's son too must die under the same stern law of retaliation (§ 230), and if a slave was killed the builder was to give another slave of equal value in compensation (§ 231). If no human life was lost the builder was to make good all the furniture that had been damaged in the collapse and must rebuild the house at his own cost (§ 232); the same rule held good if only a single wall fell in (§ 233).

A boat-builder received 2 shekel to supply a boat of a size that would hold 60 *gur* (§ 234), which seems to have been the normal size of a boat. The payment for larger boats was arrived at by taking 60 *gur* as the starting point; 1 *gur* contained 121 litres in early Babylonian times, but later 72.7 litres. The purchaser had a year's guarantee; if the boat sprang a leak or was otherwise seen to be badly constructed the boat-builder was bound to repair the boat at his own expense (§ 235).

If the owner of the boat hired out the boat the person hiring it was in every respect responsible for the boat to the owner (§ 236). But the latter might also engage a skipper by paying him 6 *gur* of corn a year (§ 239); this skipper was then responsible to the owner for the boat as well as the cargo (corn, wool, oil, dates) if both were lost by shipwreck (§ 237). If the skipper saved the sunken boat he was to pay half the value of the boat as compensation for the damage done to it (§ 238). And finally, if a hired skipper ran into another

boat causing the loss of boat and cargo, he was liable to make good the owner's losses after the latter had specified on his oath what he had lost (§ 240).

Clauses 242–277 largely regulate rent and service conditions, in so far as work is concerned which is not done by slaves. The rules for the hiring of draught oxen and working animals for farms come first; payment for the hiring of oxen varied according to the uses to which they were put. A draught ox cost 4 *gur* of corn a year, an ox for other work only 3 *gur* of corn (§§ 242–243); if such an ox or an ass was killed by a lion, the owner, and not the hirer of it, bore the loss (§ 244). But if the hirer neglected or misused the animal so that it died he was to pay the owner the full value of the ox in compensation (§ 245). For other injuries to it while it was on hire the hirer was to compensate the owner in the following way: if the ox broke a leg, it was no use, and the owner received damages covering the value of a similar ox (§ 246), for injury to the eyes half the value of the ox was paid in silver (§ 247), and if it broke its horns or its tail was cut off or it suffered other injuries one fourth of the value of the ox was to be paid (§ 248). "If a god smite it" (*i-lum im-ḥa-zu-ma*), i.e. if the ox died of a disease or by an accident caused by storm, floods, or lightning, and the hirer testified to this by oath he was not liable to pay compensation to the owner (§ 249). Finally the hirer was responsible for the damage the animal might do. If the hirer of a bull knew that it was in the habit of goring and did not swathe the horns for the protection of people or see that the bull was well tethered, and it then gored a gentleman's son to death, the hirer was to pay $\frac{1}{2}$ *mana* of silver by way of compensation (§ 251). If the bull killed a gentleman's slave the compensation was $\frac{1}{3}$ of a *mana* (§ 252). But if a bull suddenly became vicious when it was being led along the street, and in this state caused loss of human life, neither the owner nor the hirer could be sued (§ 250).

What a tenant farmer or leaseholder received as payment is not mentioned, whereas it is inculcated that stealing of seed-grain as well as reaped corn entails the penalty of having the fingers cut off (§ 253). Laziness or neglect which will cause the fields to be empty of ripe corn was punished by a fine of 60 *gur* of corn for each 65 hectares of arable land. The pay for hired human labour for farm-work was as follows: a labourer in the field 8 *gur* of corn a year, a head shepherd or cow-

herd received the same pay, while an ordinary shepherd (boy?) was paid 6 *gur* of corn a year (§§ 257, 261, 258).

It was the leading cowherd's duty to watch over the propagation of the cattle so that the birth rate was not reduced, and he would be held responsible if nevertheless this happened (§ 264). Further the herd saw to the sale of cattle, but if he altered the price fixed by the owner and proved dishonest he was to pay the owner 10 times his loss in compensation (§ 265); other negligence entailing loss to the owner was made good by just as much cattle as had been lost by it (§ 267); only for loss in the fold caused by a god or a lion the herder was not held liable and the owner had to bear the loss (§ 266).

A number of wages laws (§§ 268-77) bring to an end the section dealing with hire in Hammurabi's Code. The price per day for animals used at the threshing of corn is 20 *ka* for an ox, 10 *ka* for an ass, 1 *ka* for a goat (or a young heifer); 1 *ka* = 0.4 litres. To hire an ox, a cart, and a driver cost 180 *ka* of corn per day, the cart alone costing 40 *ka*. The hiring of a boat built to sail against the current (*ma-hi-ir-tum*) was 2 $\frac{1}{2}$ *še* of silver per day; a *še* was $\frac{1}{180}$ of a shekel, which, as previously mentioned, was 8.4 gr. of silver. A boat whose tonnage was 60 *gur* (cp. § 234) cost 30 *še* of silver daily or $\frac{1}{6}$ of a shekel.

Finally, we know the daily wage of a hired labourer; i.e. any worker doing all kinds of work except that of the labourer in the field whose wages we have mentioned under § 257. A workman in the 5 first months of the year received 6 *še* of silver, but for the last 7 months 5 *še*. As regards the daily wage of artisans we only know three rates, the text of § 274 being unfortunately defective; a brickmaker and a tailor received 5 *še* each, a carpenter 4 *še*. Even though we lack all means of checking the monetary values of the age of Hammurabi, these daily wages seem low compared with the fact that the fines mentioned in the Code are often 1, $\frac{1}{2}$, or $\frac{1}{3}$ of a *mana* of silver, and when we consider that 1 *mana* = 60 shekel and 1 shekel = 180 *še*.

§ 18. The slave laws (§§ 276-282) which form the conclusion of Hammurabi's civil law do not give us any picture of the life conditions of the Babylonian slave or his protection by the law. They deal chiefly with the procedure to be observed at their sale or pur-

chase, including the purchase of foreign slaves. But just as the Code of Hammurabi gives us excellent information of the daily life of the Babylonian land owner and owner of house-property, the law clauses ranging over the greater part of the events in which he takes part in secular life, thus the Code as a whole, by always stating the conditions of the slaves in cases of debt, compensation, surgical operations, legacies etc., gives us a good general idea of the circumstances of the slaves, to which can be added textual evidence from later times.

Among the seamy sides of slave life was first and last their unfree and dependent position in the community, where they were distinguished from free men by the external sign of close-cropped hair and the slave mark branded on their foreheads. When slaves were freed this slave mark, as we shall see, was mentioned, but that all slaves did not bear it appears from §§ 226-27, where the penalty for branding a slave without the owner's consent is given as the cutting off of the fingers. The reason for this punishment is said to be that a branded slave cannot be sold; so we may conjecture that the brand was the owner's name or some sign of his house; in that case a slave could not of course be sold. To the external signs of humiliation was added the treatment, and even though our investigations showed the general result that conditions for slaves in Babylon were relatively good and their treatment humane, we must not forget that among the slave owners in Mesopotamia as everywhere else on this earth there were bad-tempered and malicious people, and that the slave was the owner's property, which it was to his own interest to treat well, so that he should not lose the labour of this piece of property. The small compensation and fines paid in the case of slaves as compared with gentlemen and free men also show us that the slave was not regarded as a member of the human community but as a piece of property. It is difficult to estimate the price paid for a slave when bought or sold, but perhaps § 116 may help us. Here we hear of a creditor who arrests his debtor in his own home for a debt of corn or money. If the arrested person died from blows (*i-na ma-ḥa-zi-im*) or other ill-treatment and he was the son of a gentleman, the creditor's son was to be put to death under the law of retaliation. If he was the slave of another gentleman, $\frac{1}{3}$ *mana* of silver was to be paid to the latter. This amount would seem to be a compensation

equal to the purchase price for a slave, according to the other clauses of Hammurabi's Code.

We have evidence that slaves were flogged to death. Further, they were punished by having their ears cut off if they struck a gentleman's son (cf. § 205) or showed the least insubordination (§ 282). Their unfree life was spent in toil and drudgery, and slaves on farms were especially very hard-worked at harvest time. A rich slave-owner would further exploit them by hiring them out at that season for a payment of 4.2 litres of corn, while the hirer was to pay full compensation if the slave died, escaped, perished (by accident?), became incapacitated, or fell ill. To this must be added that the slave could be sold after a shorter or longer stay with his master, and that this might mean both an improvement and an aggravation of the treatment meted out to him. In §§ 278-281 various problems relating to the purchase and sale of slaves are dealt with, but all the provisions only concern themselves with the interests of the respective slave-owners. At the sale of a slave a month's guarantee was given, and if the slave fell ill within that period the purchaser might return him to the seller (§ 278); in general it is emphasised that the seller must be responsible to the purchaser in case a third party put in a claim (*paḫru*) when a slave or slave woman was sold.

Among the bright sides of slave life it must be pointed out that the slave women were as a rule the mistresses of their owner, the master of the house, and that this, at any rate if the wife were childless, was with her full consent. Even though slave women had many duties, had to grind corn and bake, wash the feet of their mistress, carry her chair to the temple of her god, do her hair, and wait on her, the slave woman's relations with the owner and the birth of children brought both modifications and gleams of sunlight in the unfree toilsome life. We have evidence from the Assyrian time that slaves were given slave women for their wives, for one we even know that he had two wives, so that a slave could have his share of the joys of family life. Further it must be kept in mind that the Code of Hammurabi contains a group of provisions laying down rules for the legal position and right of inheritance in "mixed" marriages, i.e. the legal union as husband and wife of a slave and a gentleman's daughter. Above in pp. 554 f. we pointed out this most interesting feature of the social culture of Babylonia in the time of Hammurabi, and

at this point we may recall that the children of such a marriage were protected by the law and could not be put to work by the slave owner (§ 175) while the slave family possessed a certain *peculium*, to speak with the Romans, i.e. had the control of acquired property with the consent of the slave-owner.

But of course the desire to be freed overshadowed everything else in the thoughts and life of a slave. Freedom (*andurâru*) could be obtained by adoption, which, however, still made the adopted slave dependent on his patron to whose support he was constantly to contribute by his work and his presence, or it could be achieved by redemption (*ipšrum*). By these means the slave immediately became a free man, but it was difficult for a slave to procure the necessary sum which, as we saw, must be estimated at about $\frac{1}{2}$ *mana* of silver. We noted in §§ 170–171 that a gentleman's children by a slave woman who had been recognised by their father as the equals of his wife's children shared equally with the latter in the inheritance after the death of their father, while if the master of the house had not recognised the children these and their mother were given their freedom when the master of the house died. For a male slave, on the other hand, redemption was the only way out. If, however, the necessary means had been procured the liberation took place with the observance of a particular ceremony, often by the river. The slave-owner washed the slave's face with water, looking eastward; then the slave brand was cut away, the blood wiped off his forehead, and his (symbolical) chains removed. Finally he received a written document to prevent his former master or his heirs from casting doubts on his liberty. The slave brand, which in early times seems to have been on the forehead and burned in, was in Neo-Babylonian times tattooed on the ear or the right or left arm. As a rule it was the name of the slave-owner, but it might be the symbol of a god, e.g. the stylus of the god Nabû.

To ransom Babylonian citizens who languished as war captives in foreign countries was a commendable act, we learn from § 32 of Hammurabi's Code. The purchase money was to be paid to the purchaser either by the redeemed slave himself or, if he had no cash in hand, since his field, garden, or house must not be used for the purpose, the temple or the treasury (fisc) of his city was to make good his outlay to the purchaser. If a slave brought in a foreign country

(*i-na ma-at nu-ku-ur-tim*) proved to have been carried off from his country by enemies and his original owner recognised him in the purchaser's house, a problem arose as to the ownership of the slave. The question being incapable of settlement, the slave was set free (§ 280).

§ 19. Hammurabi's Code is a unique document. The king's rescript in the Preamble and the Epilogue, in which the purpose of the law and the lines he has tried to follow are set forth, forms a worthy frame for the great legislative work embodied in the 282 provisions. These cover the whole life of the Babylonian citizen and at the same time give us an insight into the life conditions of the slave class. We follow in detail the building up of family life and note the problems that are urgent when death comes and the estate is to be divided; we go into the fields and can watch the farm work through the provisions concerning debt, the hiring of draught animals and human labour, and the wages of the farm hands. We feel the mutual responsibility of men and see that severe penalties serve to regulate the relations of the citizens. And in the opening clauses (§§ 1-5) it is shown to the whole people that the law as here set forth rests on a just foundation giving equal security to all, and that the government guarantees a righteous administration of justice. And considering the great age of Hammurabi's Code in the history of human civilisation, the codification being apparently terminated in the 22nd year (see above p. 530) of the king's reign, i.e. c. 1771/70 B.C., this law of the realm remains a unique testimony to the high stage of culture attained by the Babylonians.

The making of the law of the realm, its publication, and enforcement of its observance by the functionaries in conjunction with the laymen, was the realisation of one of Hammurabi's great thoughts. The fact that he owed to Sumu-la-ilum, one of his predecessors, preparatory measures for his legislative work, and that the latter was perhaps the original author of the idea of the Code, does not detract from the honour due to Hammurabi, for he put the idea into practice and gave his empire and his people a legal foundation on which to build up civil life. But another great deed was done by Hammurabi when he introduced a particular form of state religion into his empire.

Prototypes of a centralisation of religion may be pointed out as

far back as Sumerian times, but the idea is different from that of Hammurabi. Lugal-zaggisi (2313-2289), the ruler of Uruk, who was the first to control all the Sumerian city-states in southern Babylonia seems to have wanted to centralise the religions of the various city-states by erecting or sanctioning, in the non-political city of Nippur, a shrine and cult of a superior order to the god Enlil in his realm. Perhaps the elevation of the Uruk deity Anu to supreme god, though of a somewhat faded and vague kind, can be traced back to Lugal-zaggisi's time, but it must be strongly emphasised partly that the idea always had a formal and theologico-mythological character, partly that Anu's secure position as supreme god was not realised until the Babylonian period.

The temple at Nippur was supported by the rulers of Agade, the Semitic rulers Sargon, who overthrew the power of Lugal-zaggisi, and Naram-Sin, but it seems certain that Enlil at Nippur was unable to bring about religious unity and security in Agade, Naram-Sin's deification being that ruler's attempt to make both the inhabitants of his realm and the captive foreigners rally round one religious idea. The mighty Sumerian rulers of the Ur III Dynasty maintained the idea of deification without any attempt to co-ordinate it with the people's century-old idea of Nippur as the great sacred place of the realm. The great Nippur stores are enough to show us that the rulers of the Ur III Dynasty did not dissociate themselves from Lugal-zaggisi's religious centralisation, which at the last rulers' time was about 300 years old and had lost its political background, the mutually competing city-states.

Unlike the later Agade rulers and the kings of the Ur III Dynasty, Hammurabi was a secular ruler. By military skill, though with inferior forces, he defeated his enemies, and with the publication of his civil law for the whole realm he created an empire in which law and order prevailed. And with regard to religious matters in his realm he acted too as a secular ruler who desires order, security, and above all centralisation. In his Preamble to the Code the king mentions some 20 cities the temples of which he has restored or in other ways given assistance. This testifies to Hammurabi's sense of order and his interest in the religion of the empire but is no attempt to support local temples as such. The conditions prevailing in the period of the Sumerian city-state had long since passed away; in an

administrative and a legal respect the realm was a unity, the king was the secular ruler, a worldly king who had been given the government of the land and people by the gods and who desired that the religious conditions should be co-ordinated in accordance with the idea of centralisation. In the Sumerian period when, as the centuries passed, sometimes one, sometimes another city-state was predominant in Sumer, the idea of a superior shrine for the cult at Nippur might be a suitable solution of the problems of religious administration; in the empire of Hammurabi, where the civil servants of the central administration had taken the place of the local city rulers and where absolute unity of administration prevailed, the religious institution at Nippur was superfluous and obsolete.

Babylon, the capital city of the 1 Babylonian Dynasty since 1894 B.C., in Hammurabi's days the seat of the ruler of an empire and of the central administration, inevitably became the central shrine of the realm. The old city god Marduk was raised above all the local deities of the country and the Semitic name, Bêlu, for the ancient Sumerian god Enlil at Nippur was transferred to Marduk and now remains to us as the sole testimony to the position of the god of Nippur in pre-Babylonian times. The cult in Marduk's temple Esagila in Babylon became the central religion of the realm.

Marduk's supremacy, not only formal but real, over the other gods is clearly manifested in the Epic of the Creation, termed from the opening words *Enuma elish*, "Time was, when on high". This religious epic was found, inscribed on 7 clay tablets, in Ashurbanipal's so-called library during the excavations in Nineveh in the first days of Assyriology, but its existence was first established in 1875 by George Smith. Other clay tablets and fragments of it have since been found at Assur, Kish and Uruk, and while the Ashurbanipal copy dates from the 7th century B.C. the finds at Assur are from about 1000 B.C. The copy from Nineveh, however, despite its late date, represents the 1. Babylonian Dynasty's recension of the text, as can be verified amongst other things by a study of one of the earlier Kassite kings' inscriptions, in which enumerations are found that accord with the Ashurbanipal recension of *Enuma elish*.

To call *Enuma elish* the creation epic is in some degree unwarranted. The name dates from the first days of Assyriology when enquirers were much interested in Old Testament analogies. The

recital of the poem at the great annually returning *akīlu* festival, on which see Chapter XIII, shows us that its original function was that of a cult legend, i.e. the text which accompanied the dramatically performed religious acts, and which partly indicated the import of these. But it must also be emphasised that the essential part of the cult poem is not the creation of the cosmos but the antagonism between various groups of divine powers, the struggle following from it, the description of the battle, and the victory of one group.

The battle is fought between the gods on one side against *Tiāmat* and her gang on the other, the whole story is most dramatically staged, and a sinister touch is given to the description of the frothing beasts on the wrong side of the audience's sympathy. *Tiāmat* with all her satellites is the river with its tributaries and canal system, which in spring overflows its banks and threatens the cosmos, i.e. the Babylonian civilisation, with destruction. As pointed out in Chapter I, the life of the Babylonians was bounded by two curses, too much or too little water, and *Enuma elish* is first and last the dithyramb extolling the deity who once, before the creation of the world, prototypically controlled the waters, erected the cosmos as a result, and thus gave man the assurance that they too would be successful in doing so if the cult drama describing the triumph over the waters was performed with the proper rites at the annual *akīlu* festival.

Man's guarantor in *Enuma elish* is Babylon's old city god *Marduk*, from which we learn that the latter at the time of our recension was the supreme god of the empire, and hence we may assign our recension of the poem to *Hammurabi's* age. We possess other texts, partly fragments, partly such in which the fight and succeeding creation are mentioned incidentally, showing us that other deities were once conceived as creators, those who after the taming of the waters create heaven and earth, fix the stars in their orbits, and finally create man of blood and bone. The act of creation from a ritual religious point of view is identical with the victory over the waters, for a cosmos is not possible until the waters have been curbed. Such early creators from the Sumerian period are *Ea* of *Eridu*, *Anu* of *Uruk*, and *Enlil* of *Nippur*, to mention only the most important. *Hammurabi* centralised the mythological tales, which all have a ritual background, and made *Marduk* the city god of his dynasty, the victor and creator.

Enuma elish in the form in which we know it, has few reminis-

cences of a period when Marduk was not supreme, but the poem's account of how first Ea, later Anu, in vain tried to curb Tiāmat shows us that Marduk's supremacy was of more recent date. Enlil of Nippur, the mighty deity of Sumer, is merely mentioned as the one who watches over a particular group of stars in the firmament (Tablet V 8), while elsewhere (Tablet VI 60) the name occurs as an epithet of Marduk. But as mentioned above, Marduk, as Bêlu, had entirely superseded the old Nippur god in the prevailing religious ideas.

All this was the work of Hammurabi as a link in the centralisation of the empire. Marduk's temple at Babylon was the state sanctuary, and the *akītu* festival with Marduk as the suffering and acting chief character was the principal festival of the empire, which gathered, in sympathy with its idea and execution, all Babylonians who through their city gods and representatives of their governments went up to Babylon to attend the annual festival. *Enuma elish* has a passage which is a direct parallel to the opening words of Hammurabi's Code, so that we are not left in doubt as to the contemporaneity of the two. In the interpretation or commentary on the names of Marduk at the conclusion of *Enuma elish* (Tablets VI-VII), Marduk is referred to as the god who rightfully enforces the commands (*te-ri-e-li*, Tablet VII 122), i.e. the laws, of Anu, Enlil, and Ea. It fully agrees with this that Hammurabi, in place of Marduk, according to the beginning of the Preamble of Hammurabi's Code, is entrusted by Anu, Enlil, and Ea with "a kingdom, the foundations of which are as firm as heaven and earth"¹ to let "justice prevail in the land and confound evil men and ruffians, so that the strong cannot oppress the weak."²

The king has thus been chosen by the gods from a purely formal point of view. The facts are these: Sumu-la-ilum, the second ruler of the First Babylonian Dynasty, established the royal succession within the realm, but the successive kings of Sumu-la-ilum's family received their investiture from the gods, after the time of Hammurabi from Marduk alone, by a special "hand ceremony" taking place at the *akītu* festival. In this ceremony Hammurabi, and all his successors who reigned in Babylonia, e.g. also Assyrian conquerors, such as Ashurbanipal (668-626), adhering strictly to a particular ritual, "seized Marduk's hand" (*kal^{lu} Bêl iṣ-bat*), i.e. by taking the hand

¹ Cod. Hamm. I 21-26.

² Cod. Hamm. I 32-39.

of the great statue of Marduk in the Esagila temple he had Marduk's strength transferred to himself, was identified with Marduk, so that the king at the *akītu* festival could officiate as Marduk, kill *Tiāmat*, and secure the maintenance of the cosmos, the waters of the coming year being controlled. The investiture of the king took place at the first *akītu* festival held after his accession, and after that the king was not only the earth-born representative of Marduk and at the same time his high priest, he was also Marduk himself in the dramatic cult ceremonies in which the cosmos was re-created for every coming year.

Finally one more idea of religious centralisation from Hammurabi's time may be mentioned here. Countless names of Sumerian goddesses have come down to us, but here as everywhere when we are to characterise the individual goddesses we are left relatively empty-handed, because the domain of a goddess in a primitive city community is all-embracing as regards all the functions inseparably bound up with woman as such. Love, pregnancy, child-bearing, suckling, the guiding of the child's first and later steps, are the primary functions; they are transferred to the calving of cows, the hunted animals' easting of their young, the germinating power of the trees, the budding of the flowering plants, the swelling of the waters, and the spring that supersedes the winter; fertility everywhere and the power of germinating inherent in all that is alive becomes the field of activity of the city goddess. The name may change from city to city, but the field of activity is the same for all goddesses. With the city god whose activities may be said to run parallel to those of the city goddess, she also stands for the security of the city area whose protectress she is; hence we may meet the goddess as the patroness of the city forces, and again transferred, at the head of the army, whose success she ensures.

As such a highly complex figure the goddess Ishtar entered Babylonia with the arrival of the West Semitic Amorites in Mesopotamia and was at first assimilated by this or the other Sumerian goddess. But counting from the time of Hammurabi, Ishtar, who linguistically and actually was identical with the Palestine Astarte, became a synonym of the word "goddess" (*iš-ta-ru* = *il-tum* in the vocabularies), and the plural *ištarāti* means "goddesses". All other goddesses were ousted and henceforward appeared as epithets of Ishtar only, as we see in the poetical myth about Agushaya (VAT 5946), composed to show

the identity of the goddesses Ishtar, Agushaya, and Şaltu, and dating from the time of the I. Babylonian Dynasty (V. Scheil, *RA* XV 1918). On this point Hammurabi's idea of centralisation gained complete ascendancy, the way being paved by the identical spheres of activity of the numerous goddesses.

After Hammurabi's time the old Sumerian gods became in the main mythological accessories; a few like Ea of Eridu retained a position through the exorcism ritual, Sumerian texts being still used in this. The supremacy of Marduk and Ishtar manifest the victory of the state religion. The *akitu* festival as the great cult festival of the empire, and *Enuma elish*, the cult text used for it, with Marduk as the victor and creator, are other manifestations of the same development. We are of course unable to decide whether Hammurabi's legislation for the whole country and his religious reform were of equal importance for the inhabitants of his empire, but we know that offences against the law could at no time be avoided, whereas we hear that like true Babylonians the Persian kings after the conquest of Babylon in 538 B.C. caused the *akitu* festival to be held in the usual way. This affords very strong evidence that they deferred to the religious feelings of the vanquished, who since the days of Hammurabi had found their religious rallying point in the observance of this central festival.

§ 20. With Hammurabi the Babylonian empire reached its height. It is true that the I. Babylonian Dynasty survived till 1595 B.C., but already under Hammurabi's son Samsu-iluna (1749-1712) the country was seriously reduced. Enemies came both from the north, north-east, and south. Assyria was an early loss, perhaps partly due to the invasions of the eastern Kassites (1740 B.C.). Samsu-iluna in the 9th year of his reign succeeded in beating back their onslaughts but it appears with all plainness from the occurrence of Kassite names of workmen, reapers, and grooms in the business documents of the next 150 years, that a peaceful trickling in of Kassites took place after Samsu-iluna. The chief contingent of the Kassites consisted of West Iranian people, perhaps related to the Elamites, but the names of their princes show that their leaders were Indo-Europeans, and the westward pressure of Kassites into Mesopotamia was due to the migrations caused by the arrival of the Indo-Europeans in West Iran.

In the southern part of the empire too Samsu-iluna lost his influence. After a coalition of rebels led by the cities of Larsa, Uruk, and Isin had for two years defied him with a negative result, open rebellion broke out in the coastal country along the Persian Gulf. The leader was Iluma-ilum, who claimed descent from the Isin Dynasty. Down there in the "Sea-Land", as the Babylonians called it, there were among others some remnants of the Sumerian population who had fled to this place and headed by Iluma-ilum were strong enough to make themselves independent. They even proceeded to aggression in the north and forced Samsu-iluna to retreat to the country north of Nippur. Here he repaired an old fortified defence line built earlier by Sumu-la-ilum, and this line remained the southern boundary of Babylonia until 1595 B.C. Thus Hammurabi's empire had become much reduced in the north and south already under his son.

Iluma-ilum founded the "Sea-Land Dynasty", the II. Babylonian Dynasty (1741-1430), which reigned in the coastal country contemporaneously with the five last rulers of the I. Babylonian Dynasty, and remained untouched by the great catastrophe in 1595, and even derived benefit from it. In that year the danger came from the west, from distant Asia Minor, where the arrival of other Indo-Europeans perhaps about 2100 B.C. caused similar migrations to those in West Iran. The Hittites of Asia Minor were Indo-Europeans in respect of language, as proved by the investigations of Fr. Hrozný¹ and Holger Pedersen², but we must note that this state governed by Indo-European rulers contained several contingents of people from pre-Indo-European times.—It is possible that the ancestors of the Hittites originally lived in the southern Caucasus area (Neolithic stage) as pointed out by Sir Leonard Woolley.³ After that, he thinks, in the latter part of the fourth millennium they were forced to seek a home elsewhere after having built up a Chalcolithic culture. As the "Khirbet Kerak people"—so named by Woolley after a hand-made pottery, rather thick and heavy, highly burnished, occasionally red all over, more often black, but the two colours are often combined: inside red, outside black, the decoration is simple geometrical motives—they lived in the fertile valley of 'Amuq in Syria. From here they were

¹ *Die Sprache der Hethiter* . . . (1916-) 1917 (*Boghazköi-Studien* 1-2).

² *Hittitisch und die anderen indoeuropäischen Sprachen* (1938).

³ *A Forgotten Kingdom* (1953), pp. 31-37.

expelled by other peoples and fled through the passes of Amanus to Asia Minor where they were able c. 1740 to set up the Old Hittite Kingdom. Woolley's interesting comments are based on a study of the Khirbet Kerak Pottery, originally found in Palestine to which parts of the peoples of 'Amuq must also have fled, this time in a southerly direction, but we cannot as yet consider his argument proved.—Among the kings of the so-called Old Hittite Kingdom (c. 1740–1460) we may mention Tlabarnash, who extended the limits of his country to the Black Sea and the Mediterranean, and whose name later became the common title for a king, his son Hattushilish I who subdued northern Syria, and his son again, Murshilish I (1620–1590), who by way of Aleppo invaded Mesopotamia, and penetrated as far as Babylon itself, which was captured and sacked in c. 1595 B.C. A Hittite inscription tells us about this: "He (i.e. Murshilish I) marched against Aleppo and destroyed Aleppo. He carried off the captives from Aleppo with their possessions to Hattushash (the capital of the Hittites). But then he went against Babylon and destroyed Babylon; he also fought the Hurrians (?). The captives of Babylon and their possessions he kept in Hattushash".¹

This was the end of the glorious I. Babylonian Dynasty among whose kings Hammurabi's name shines with imperishable lustre. Soon after the conquest of Babylon the Hittites seem to have withdrawn to N. Syria and Asia Minor, and the "Sea-Land Dynasty" took control of Babylonia from 1594–1430. In the year 1449 the II. Babylonian Dynasty lost control of N. Babylonia; the Kassites had again (see p. 574) invaded Babylonia from the north and the east, and this time they were destined to subdue the whole of this country by force of arms. Barely 20 years after the Kassites had established their power in N. Babylonia the "Sea-Land Dynasty" had to give up all resistance. And as the III. Babylonian Dynasty the Kassite rulers governed the whole of Babylonia from c. 1430 to 1165.

This long period under foreign rule combined with the rapid progress of the northern neighbour Assyria as an organised and efficient fighting state put an end to Babylonia's role as a great power. In a cultural as well as a political respect Babylonia now sinks down to be a second-class state without any wide political influence, and often a vassal state under Assyria.

¹ Cf. J. Friedrich, *Aus dem hethitischen Schrifttum* (1925), p. 7 (*Der Alte Orient* XXIV 3).

CHAPTER XI

THE ASSYRIANS

§ 1. In Chapter VII we saw that the northern part of Mesopotamia, known by the name of Assyria from the second millennium B.C., was inhabited as far back as prehistoric times; from Chapters IX-X, on the other hand, it appeared that the political power as well as the cultural achievements emanated from fertile S. Mesopotamia, where city-states flourished from the middle of the 3th millennium B.C. and later became united under strong rulers into larger political units. Originally southern Mesopotamia was governed by the Sumerians, who were the original inhabitants of this region, but from about 1900 the Semitic peoples (Kishioties, Amorites) who had for long periods been immigrating into the country became the more numerous, and with Hammurabi's victory over Rim-Sin in 1762 B.C. the Semites now known as the Babylonians were masters of Mesopotamia.

In Assyria, on the other hand, we are unable to trace an unbroken line of development. From prehistoric times we have finds from settlements at Nineveh, Gawra, Arpachiyah, and Hassuna, as mentioned in Chapter VII, but the difficulties involved in gaining some knowledge of the earliest historical events in Assyria are enormous, but we may here point out what we may venture to regard as the result of many investigations and discussions.

The extensive German excavations in 1903-14 under the leadership of W. Andrae, at Kal'at Sharqât, the site where Assyria's first capital Assur was situated in antiquity, have given us good information of the chronology of the settlement, which of course is only relative compared with our Sumerian-Babylonian experience. Altogether eight strata have been found, the excavation of the archaic Ishtar temple having especially been very instructive, as through this the earliest five strata in the settlement seem definitely established. While the latest or youngest

stratum (A) can be dated at Tukulti-Ninurta I's time (1234–1198), definite dates for the earliest strata are difficult to arrive at. But the culture which we encounter in the H and G Strata, both by the artistic execution of the objects and by the architectural ground plans we can ascertain, shows us traces of the Sumerian culture to which we have good parallels in the finds from Mari, Khafâjah, Tell Asmar, Ur, Kish, and Lagash; the date may perhaps be put at Early Dynastic Period III a-b. The destruction of Stratum G and the mean little buildings representing Stratum F on the top of the ruins of the Ishtar temple, reveal a break in the development which must be due to foreign invasion, war, and despoilment. Stratum E represents Assur's incorporation under the mighty Sumerian Ur III Dynasty (2123–2016); once more a strong Sumerian cultural influence is traceable, and in the town of Assur the Sumerian ruler set up his vicegerent (*šak(k)anakku*) as we learn from the following inscription on a votive tablet of plaster: "Zâriḫum, Ashur's vicegerent, who is his servant, has built the temple to *Bêlat êkallim*, his mistress, in order that Bur-Sin, the strong king of Ur and king of the four quarters of the world may live (long?)"¹

Of historical events from the time of Stratum F may be mentioned one of Sargon's 34 military expeditions, which had the Assyrian region as its objective, some time after 2303 B.C. A fine copper head found at Nineveh dating from the Agade age may be a reminiscence of his conquest. Further we know that both Rimush and Naram-Sin (2224–2187) extended their power to this country and even had a temple built in Nineveh, a clear sign that friendly relations had at any rate been established between the north and the south in their time. From Stratum D, which covers approximately the period of the I. Babylonian Dynasty (1894–1595), we know of the political history; first Ilushuma of Assur (see pp. 464, 573) who called himself *iššakku*, freed his city area from Sumerian control and, perhaps in connection with the events after the fall of Ur III, interfered in Babylonian politics; then followed Elamite influence perhaps not unassociated with the great period of Rim-Sin of Larsa in the south; then Hammurabi (1792–1750) subjugated the Assyrian land, which was again lost under Samsu-iluna, his son (1749–1712).

These are the motley bits of a mosaic we possess to tell us of the

¹ O. Schroeder, *Keilschrifttexte aus Assur historischen Inhalts* II (1922), No. 2 (WVDOG XXXVII).

history of Assyria prior to 1700 B.C., from which I draw the following conclusions. The superior Sumerian culture early exerted its influence in the north, particularly after the Sumerians in present-day Kal'at Sharkât had built a kind of barrier-fort against invaders from the north and east, this city at the extreme point of Jebel Hamrin presenting an excellent *point d'appui*. While the troops and their officers were no doubt Sumerians, the gradually increasing population of the ancient Assur must be supposed to have been Subarians (cf. Chapter VII § 16), whose culture here acquired a decidedly Sumerian character (Assur Strata H and G). The glorious but temporary rule of the Semitic Kishiotes in Sumer and the ensuing revolutions afforded an opportunity, however, for another Semitic tribe of invaders, the Assyrians, to establish themselves by force at Assur and probably also in other places in the Assyrian area. Assur's Stratum F is the only reminiscence of the Assyrian invasion. Agade princes such as Sargon and Naram-Sin subjugated Assyrian lands, thus also Assur, and the already much mixed population with Subarians as the substratum, and an admixture of Sumerians and Assyrians, respectively in a minority and in great quantities, now received an Akkadian element. Then followed Sumerian control again under the Ur III Dynasty (the Assur Stratum E), but the Assyrians broke away at the fall of the latter, and could even, under the leadership of Ilushuma, march against the southern country at the beginning of the period marked by the arrival of the Amorites (1894) in Mesopotamia. Elamite influence, and later the victories of the mighty Hammurabi again made Assyrian land a vassal state which only when the Kassites began their attacks on Hammurabi's successor freed itself from Babylonian supremacy.

Thus on the view here set forth the population of Assyria is not regarded as a conglomerate of the Subarian settlers and the Semitic invaders from the south (Kishiotes) and the west (Amorites), but a fresh contingent of Semitic settlers, the Assyrians, is regarded as the dominant element. Of course the new arrivals must have been influenced by the Sumerianised Subarians, just as the Assyrians were to some extent mixed with the Subarians. But the point is that the Assyrians did not emerge as a mixture of Subarians and Kishiotes, nor as a branch of the Amorites.

We do not know whence the Assyrians came, though there can be no doubt it was from the west; Mari and the Habur regions were

probably stations on the way. The time of their arrival seems to have been before Sargon of Agade, probably some time between 2350 and 2300 B.C. But that the Assyrians were not Kishioties or Amorites is now known with certainty. Assyrian is an East Semitic language like Babylonian, but no dialect of the latter. This is shown by the vocalisation and the vocabulary, which in the 2nd millennium exhibit a difference from Babylonian which is not that of a dialect. Ethnically the Assyrians further represent another type than the Arabian dominant in southern Mesopotamia; they are thickset, not long and lean like the Arabs, with a fleshy nose and thick curly black hair, they recall the Syrian Aramaeans. And finally from the very beginning they show us a distinctive culture different from that of the Babylonians, being independent of their southern Semitic neighbours in their calendar system, with the names of the months which are not Subaraic loans, in the *limmu* system, of which more later, and in their legislation.

Among the earliest governors of Assur the rulers of Assyria in much later times mention names such as Ushpia (or Aushpia) who founded the god Ashur's temple, and Kikia who built the wall round Assur. These names have been held to be Subaraic, but because Kikiaenni is perhaps Subaraic, Kikia (and Ushpia) need not be so. Semitic these names are not, however, and perhaps Sidney Smith¹ is right in saying that the Assyrians, already before they invaded northern Mesopotamia, were a mixed race, a feature which must have been further accentuated in Assyria, where the infiltration took place among the settled Sumerianised Subarians who so far as we can see had a cultural centre in Assur; and the importance of that city further increased when the Sumerians, as we surmise, established a military garrison there.

Thus, as far as Assyria is concerned, up to the year 1700 B.C., we can only follow the development in the city of Assur by way of a temporary Sumerian military administration. The new conquerors, the Assyrians, lost their firm grasp of Assur in the Agade Period, and in the Ur III Dynasty its governor was dependent on the mighty Sumer in the south. The invasion of the Amorites in 1894, coming a full century after the fall of Ur III with which the disintegration in the south begins, gave the city of Assur an opportunity of making the territory independent under Ilushuma; Hammurabi's expansion for a time put a stop to the development in Assyria.

¹ *Early History of Assyria to 1000 B. C.* (1928), p. 112.

We know nothing about Assyria outside the city of Assur until late in the 2nd millennium, but we may conjecture that the Assyrian conquerors did not settle in Assur only but spread over the N. Mesopotamian land, and that an assimilation with the Subarians took place. That Assur was made a centre by the conquerors too, appears from the fact that the city on account of its unique strategic position could be used as a barrier-fort against onslaughts from the mighty peoples in the south country.

§ 2. Besides the city of Assur we have one more starting point for our knowledge of the Assyrians in the beginning of the 2nd millennium. This is Kül Tepe, which is the modern name for a mound in Cappadocia in Asia Minor near Caesarea south of the river Halys; perhaps the place is identical with the old city of Kanesh as supposed e. g. by B. Hrozný who conducted the Czechoslovakian expedition (1925) to Kül Tepe and increased our knowledge of the Assyrian trading station there by fresh finds of texts. After Th. G. Pinches in 1882¹ had called attention to the so-called Cappadocian cuneiform tablets and W. Golénischeff² in 1891 had published other Cappadocian tablets, Fr. Delitzsch³ began to interpret them in 1894, but only after the First World War had come to an end was the number of texts so large that the enquirers attained decisive results.⁴ It appears with all plainness that we have here the commercial correspondence of a trading company, which may roughly be divided into three kinds: business letters, cashbook entries concerning the daily sale, and legal rulings in connection with various trade agreements and business transactions.

The cuneiform script used is the one known from the time of the Ur III Dynasty (2123–2016), just as the use of clay envelopes, with addresses and impressions of cylinder seals, for the protection of the tablets inside was introduced into Babylonia under that dynasty; further the cylinder seal of one of the clay tablets has an inscription showing that it belonged to Ur-Lugalbanda, "a servant of Ibi-Sin", the last king of Ur III. Both observations give us an upper date limit for this culture. Again, the texts mention, as the Assyrian *iššakku* in the home-

¹ *PSBA* IV (1882).

² *Vingt-quatre tablettes cappadociennes* ... (1891).

³ *Beiträge zur Entzifferung und Erklärung der kappadok. Keilschrifttafeln* (*Abhdl. d. K. Sächs. Ges. d. W. Phil.-hist. Cl.* XIV 1894).

⁴ See above Chapter V: Notes 2, 3, p. 208 and note 1 p. 218; cp. also p. 332¹.

land, Sharrukin I and later his son Puzur-Ashur II, whose reigns are dated to the same period as those of two rulers of the I. Babylonian Dynasty (Zabum and Apil-Sin) i. e. about 1844–1813 B.C. These two testimonies inform us of the approximate date of the Kül Tepe period; it covers more than 200 years, the period from c. 2039–1813 B.C.

The names of the Kül Tepe texts tell us that the trading station had taken root in an extremely mixed environment. Among the non-Semitic names there are several pre-Hittite (Hattic) ones, while repeated reference is made to the Hittites themselves whose script is found on their cylinder seals. The above-mentioned non-Assyrian names Uslipia and Kikia occur as secular names in texts from Mazaea (Caesarea), which would seem to indicate that this name form belongs to an Assyrian milieu, even if it is non-Semitic. Among the purely Assyrian names I may mention Shalim-ahum, Erishum, Ashur-rabi, and Mannu-ki-Ashur, the first two of which are known from the home country as names of city governors in Assur. And again and again the texts have the name of the Assyrian god, identical with that of the city, later with that of the country of which the city is now merely the capital, and which in the earliest times was written Ashur or Ashir.

North of Mons Argæus, the highest peak in Asia Minor, extends a fertile plain, where the city of Kanesh once stood, and where in our day the correspondence of the Assyrian trading company has been found in one of the mounds of ruins, Kül Tepe. The rich ore of Asia Minor early tempted the rulers of Mesopotamia and we know that Sargon of Agade, after his three years' campaign in Asia Minor, controlled the cedar woods of the Amanus Mountains and "the Silver Mountain", a name which perhaps indicates the Tarsus region, where silver is washed to this very day. But we know nothing of a fixed Akkadian trading station from the Agade period, though we may surely presume that the caravan route to Asia Minor, perhaps via Mari where Sargon established a strong garrison, was made as safe as possible. The Sumerians too (Ur III) established no trading stations in Asia Minor, as far as our knowledge goes at present, and it must be regarded as a misconception that B. Hrozný¹ mentions Ilushuma as the ruler who, owing to his victories in Babylonia, takes control of the Akkadian-Sumerian trading colony in Asia Minor, of which the leadership now passes to Assyrian merchants. The texts as well as the above-mentioned datings

¹ *Die älteste Geschichte Vorderasiens und Indiens* (1943), pp. 98–99.

show us that the Ur III Dynasty, subduing the city of Assur, gained control of the already existing Assyrian caravan route between Mosul and Kanesh. This no doubt took another direction than the Agadean one, but in the troublous Gutium period, when S. Mesopotamia was overrun by Barbarians coming from the east, it was probably the only Mesopotamian line of communication with Asia Minor. The great progress and prosperity of the Ur III Dynasty was not unconnected with the fact that they controlled the Assyrian caravan route, and Ur-Lugal-banda's, Ibi-Sin's "servant's", cylinder inscriptions show us the connection between Ur III and Kanesh.

But in the light of all this it is equally important to point out that the Sumerian nomenclature has not, any more than the Subaraic, been found in Kül Tepe. Here it is of no avail to say that two names for metals, viz. gold, Sumerian KU₂.GI, pronounced *guškin* by the Sumerians, though hardly in Asia Minor where the ideographic script seems to have been pronounced phonetically, and copper, Sumerian URUDU, are Sumerian loan words, the latter having even been adopted in Indo-European languages. We can only state this fact without understanding it, gold being found in Asia Minor but copper being absent in Sumer, but to use these two terms to prove the presence of Sumerians in Asia Minor is impossible.

The language of the Kül Tepe texts is Assyrian but not identical with the earliest Assyrian known from the sparse inscriptions of the homeland; probably the foreign languages of the environment asserted themselves to some extent. Thus the script does not distinguish voiced from voiceless consonants (*b* and *p*, *d* and *t*, *g* and *k*), whereas in Babylonian Akkadian *d* and *t* are practically never confused, while the absence of double consonants, replaced by lengthening of the vowel, connects Cappadocian Assyrian with the language of the earliest Assyrian inscriptions. Here are various problems which cannot be discussed in this connection (see p. 230), but in general it may be said that the peculiarities encountered in the Kül Tepe texts may be due to the circumstance that the Assyrians for about two hundred years were surrounded by peoples with other linguistic sounds and of other linguistic habits.

The distinctively Assyrian character of the trading station as contrasted with the Babylonians is manifested by the calendar and the *limmu* system constantly used in the texts. We cannot here enter into detail but merely note that none of the 12 Babylonian month-names

occur in the official Assyrian calendar, while in the Kül Tepe texts we meet with most of the later Assyrian names of the months. Since the date of the Assyrian trading station is approximately certain, the calendar names supply extremely important evidence of the Assyrians' cultural independence of the southern neighbours in Babylonia already at the start. But not only this, the very names of the months show us that the Assyrians were not nomadic hords before they invaded the Assur area (Stratum I⁷) but on the contrary a people settled somewhere in northern Syria, two month-names meaning "gourd" and "terebinth" being both plant-names from the Syrian flora. Further, the Cappadocian Assyrians have three month-names differing from those of the official calendar, and in which the meanings "garden" and "fig" denote the months in which the Assyrians were especially concerned with the care of these.

In the official calendar the name of the first month is *k(g, k)arrâte* and perhaps Sidney Smith¹ is right in saying that the name has some connection with the passage in the Black Obelisk Inscription (line 174-75) of Shalmaneser III (858-824), where in his 31st year he "draws lots" (*pu-u-[ri]*) . . . *ak(g, k)-ru-ru*) before the gods Ashur and Adad for the second time and obtains the *limnu* office. In that case the first month is designated as the one in which the year's *limnu* office is filled by the drawing of lots, which is in good agreement with the fact that the first month of the Babylonian year is Addaru, and according to Esther's book in the Old Testament the Jews celebrated Purim ("the lots") on the 14th and 15th Adar.

In Sumer (and under the influence of Sumer subsequently in Babylonia) the individual years of the king's reign were dated by an official description of some important religious or political event as e. g. "the year in which it pleased ^dBûr-^dSin, the king (of the Ur III Dynasty) to have Enlil's divine throne made"² or "the year after which ^dBûr-^dSin, the king, destroyed the town of Urbillum".³ Here too the Assyrians show their independence of the Sumerians and Babylonians by naming the year from the very earliest times after an individual, a high official, *limmu* (*limu*). At this point we encounter great difficulties in tracing the original meaning of the word, in later times it also stands

¹ *Early History of Assyria* . . . (1928), p. 116.

² N. Schneider, *An.Or.* VII (1932), No. 21.

³ G. Reisner, *Tempelurkunden aus Telloh* (1901), No. 80 (*Mitteil. aus d. orient. Samml. d. Kgl. Museum zu Berlin*, H. 16).

for the office itself: "eponymate, administrative year", another sense is "family", but whether this warrants the conclusion that each of the families in turn originally officiated at the religious rites is uncertain, though it would agree well with our knowledge of primitive societies,—as we do not know what were the official duties of the holder of the *limmu* office. From the accession of Adad-nirâri II (911) we have continuous *limmu* lists from which we see that each new year is named after a high official, their names being entered in long columns until a year under Ashurbanipal (648). From the democracies of Athens and Rome we know similar year-names, though we cannot with Ed. Meyer¹ regard the Assyrian *limmu* system as a remnant of "eine ursprünglich nahezu republikanische Verfassung", the idea here being that the *limmu* office originally depended on an election of magistrates within particular families, the official filling this post having the same status as the city governor. Of all this we know nothing but it is certain that *limmu* not only, as in late Assyrian times, was a kind of honorary title with no real duties, for we often see the Assyrian kings filling the *limmu* office in the first, or more frequently, the second year of their reign; that the royal inscriptions in the later years of the kingdom date events by the year of the king's reign (*palû*) or by the number of his campaigns (*girru*), like the Pharaohs in the New Kingdom of Egypt, merely shows a later stage of development.

Originally the holder of the *limmu* office was no doubt associated with the religious rites, as will perhaps appear from the fact that the office was filled at the beginning of the year, on which occasion, in southern Babylonia as in other parts of the world, the annual ritual festival was held with the performance of the creation and battle drama. Perhaps the religious significance of the eponym was that he was to conduct this cult festival. But subsequently other aspects come into the forefront; it is the king and his highest officials who hold the office in fairly regular alternation. The king was as a rule the ex officio holder of the *limmu* office in the second year of his reign after all ceremonies in connection with his accession and taking control had come to an end; then followed the commander-in-chief of the army, the palace steward, the chief cup-bearer, the royal mixer of ointments, and finally in a definite order of succession the various governors of the provinces. Here are some examples from the lists of eponyms in the time of

¹ *Geschichte des Altertums* VI 2 (1909), p. 539.

Tiglathpileser III (745-727): "(745) Nabû-bêl-uşur from the city of Arrapha (?). On the 13. Iyyar (Bab. Aiaru) Tiglathpileser ascended the throne. In the month of Teshri (Bab. Tashritu) he went to Mesopotamia -(744) Bêl-dân from the city of Kalhu. To the country Namri.-(743). Tiglathpileser, King of Assyria. Against the city of Arpad. Urarţu's force was defeated.-(742) Nabû-danina(n)ni, the Turtan. Against the city of Arpad.-(741) Bêl-Işarrân-bêl-uşur, palace steward. Against the city of Arpad. In the third year it was captured".¹ The *limmu* official after whom the year is named is mentioned first; then, very briefly, the most important political events of the year; Tiglathpileser III according to the above-mentioned quotation, for reasons unknown to us, seems not to have held the office of *limmu* until the third year of his reign. The election of the eponym took place on the 13th Iyyar, in the second month of the year, which corresponds to our (April-)May, at a ceremony the main feature of which seems to have been the casting or drawing of lots (*k(g, ʔ)arâru pâra*). That this investiture, of the details of which we are quite at sea and which is utterly different from the investiture of the Babylonian kings, is older than the calendar itself, has already been suggested above.

It is of the greatest importance that the Kül Tepe texts have shown us the *limmu* institution in use among the Assyrians of Cappadocia at the beginning of the second millennium. This circumstance added to the special place occupied by the Assyrian language as compared with Babylonian, and their calendar, establishes the original difference of the Assyrians from the Babylonians. Summing up we may perhaps say that the *limmu* institution originally represented something corresponding to the Sumerian theocracy, the secular administrator of which was the patesi of the city-state, but the *limmu* office was maintained in Assyria as a kind of remnant, after the theocratic conception of the state has been replaced by the autocratic monarchy, whereas such a remnant cannot be traced in Hammurabi's empire.

We have no means of deciding whether the Cappadocian *limmu* was identical with the *limmu* of the city of Assur, which is in part due to the fact that our knowledge of the constitutional relation between the trading colony in Asia Minor and the home country is not clear. We shall presently revert to this question. But it is certain that the Kül

¹ II R 52, cf. E. Schrader, *KB* I (1889), p. 212 and A. Ungnad, *RLA* II (1938), pp. 451, 445, 456, 451, and 446.

Tepe texts show us as something new, a kind of *limmu* (or two) for each *hamušlu*, i. e. five days, or a week; nor was the five-day week known in the home country where, if it once existed, we see the seven-day week from Babylonia gaining the ascendancy. This circumstance is most peculiar if we take it for granted that certain ritual functions were performed by the successive *limmu* officials, but if we may venture to assume that the eponym in the foreign colony was also the custodian of law and order, we can see more reason in it; only the five-day change seems inexplicable to us.

In the above we have used the term trading station or trading colony, and we would strongly emphasise that this term must not be strained; in our connection it merely means a number of Assyrian merchants who have settled in the Cappadocian city of Kanesh. The Kül Tepe texts are the commercial records of those associations of merchants who financed the caravan trade north of Caesarea near the Hittite capital of Hattushash, near present-day Boghazkeui, and who later went eastward through Syria by way of Harran to the valley of the Euphrates (Assur or Babylon). The leader of the Assyrians living there was called *rubâum*, "prince", while the title of the lord of Assur was *iššakku*. We know that the merchants' office lay outside the walls of Kanesh, in another town of Asia Minor, Alishar, outside the actual city citadel. These circumstances would seem to indicate that the Assyrians enjoyed extraterritorial rights, but it does not follow directly that they were subject to the town of Assur in a constitutional respect. Of this we know nothing for certain, and they were hardly colonists in the old Greek or in the modern sense of the word.

The Kül Tepe texts are often difficult to interpret, the vocabulary and technical terms being hard to understand. As an example we may mention *gârum*, often used as a parallel to *âlum*, "city". Originally the word perhaps meant "a river wharf", where the merchant arriving from abroad had the goods from his ship piled up for the inspection of would-be purchasers; from this the sense of "trading place" may be derived. But in Cappadocia it seems that it might also mean "the merchant guild living in the trading place", and "(the premises of the) commercial court". The gods invoked are those known from the home country, Ashur or Ashir, Ishtar, Adad, Shamash, and Zababa, the last-mentioned familiar to us from Kish, the first large city area of the Kishiotes in North Babylonia. Weights and measures are identi-

cal with those of Babylonia (*mana*, *šiklu* etc.), but the decimal system is used in arithmetical calculations. As we saw above this warrants no far-reaching conclusions. The Sumerians accepted both the decimal and the sexagesimal system, but it must be noted that the Semitic Babylonians contemporary with the Kül Tepe culture only used the latter as a loan from the Sumerians, and that the Assyrians therefore, on this point too, manifest the distinctive character of their culture.

Metals, (more especially silver), and the costly marble were the two chief articles which the Assyrian trading station at Kül Tepe despatched by the caravan route to Mesopotamia. Shalmaneser III (858-824) much later visited these regions himself: "To the mountain Tunni (Taurus), "the silver mountain", and the mountain Muli, "the marble mountain", I went up. I caused the image of my strength to be set up between them".¹ The business papers often contain messages in which full information is given of the nature and time of arrival of the goods, and the terms of payment. Or they may refer to a deposit of commodities or other property against legal security or even without security, or a loan of silver or copper, e. g.: "18½ shekel of solid (?) silver are due to Ashur-malik, son of Enazuen, son of Shugalia from Datiia, son of Nanibim. Within 4 months he is to pay. If he does not pay he is to give ⅓ (?) shekel interest per month. The month of Kuzalli; Ashur-emi, the skipper, is *limmu*";² the names of two witnesses conclude the contract. The long period exempted from interest in this document as in others may indicate that the duration of a caravan journey was held to be free from the burden of interest. Nevertheless we also meet with cases in which it seems impossible to estimate the duration of the journey, in the above-quoted document put at 4 months, so that a special proviso (clause) was added to the text of the contract to the effect that if the merchant did not repay the loan upon his arrival the accrued interest should be added to the sum borrowed, "in accordance with *gárum*'s word", i. e. in this case the decision of the commercial court.

Finally it should be mentioned that at the time the presence of the Assyrian trading station in Cappadocia meant nothing less than the spreading of Mesopotamian culture to the extreme west. It is true that Asia Minor had not, since the days of Sargon of Agade, been a closed

¹ L. Messerschmidt, *Keilschrifttexte aus Assur historischen Inhalts* I (1911), No. 30 (WVDOG XVI).

² W. Golénischeff, *Vingt-quatre tablettes cappadociennes* . . . (1891), No. 3.

country. That king as well as his great grandson Naram-Sin invaded it and the Gudea inscriptions show us that peaceful commercial relations were later established. But the period covering some 200 years when the Assyrians were settled as peaceful merchants in Asia Minor signified a direct influence of the utmost importance. We can trace, for instance, how the art of the country was transformed and received innovating impulses most plainly visible in the representations on cylinder seals, and likewise how an influence from the west gradually asserted itself in the Mesopotamian culture. The great political events of the 2nd millennium, to be mentioned later, further emphasise how much Mesopotamia is indebted to Asia Minor.

§ 3. The great changes in the Middle East caused by the expansion of the Hittite kingdom in the 2nd millennium, the establishment of the Mitanni state which we shall describe in broad outline in the latter part of this chapter, rendered impossible the regular caravan communication between Mesopotamia and Asia Minor. The texts from the Assyrian trading station in Kül Tepe fall silent, while in the home country a state was deliberately built up around the old strategically important trading town of Assur. From numerous inscriptions of kings from about 1300 B.C. till the fall of Nineveh in 612, combined with an abundance of secular and religious texts, we are able to gain some insight into the character of this new state in the north, and it seems appropriate to give a sketch of it here as a sequel to our description of the distinctive Assyrian culture which was based on our knowledge of the city-state of Assur and the Assyrian commercial colony in Asia Minor at the beginning of the 2nd millennium.

As pointed out above, it is a reasonable presumption that the *limmu* institution affords evidence of an originally theocratic city government. The man who, by the casting of lots among the oldest and richest families, became the *limmu* of the year, probably officiated prototypically as the city god in the rites at the beginning of the year and ritually created the means of living for the inhabitants, besides ascertaining the will of the god during the rest of the year, in ways unknown to us, and obtaining his consent on a number of points essential to the prosperity of the city-state. The Assyrian monarchy, on the other hand, was quite secular besides being autocratic, and while it is questionable whether the theocratic form of city government in Assyria arose under

the influence of the Sumerian pateship, the idea itself being in good agreement with a more primitive social organisation, it can hardly be doubted that Hammurabi's notion of kingship underlies that of Assyria, particularly as we know that he extended the boundaries of his empire to include the Assyrian territory, conquests which were lost already under his son Samsu-iluna.

Like Hammurabi, the Assyrian kings were chosen by the gods to rule the country and the people. We read in the introduction to the cylinder inscription from Kal'at Sharkât of Tiglathpileser I (1116-1078): "Ashur and the mighty gods, who have made my kingdom great and have given me power and strength as my gift, commanded that I should extend the boundaries of their country, and they entrusted to my hand their mighty weapon, the onslaught of battle. Lands, mountains, cities, and princes, (who were) Ashur's enemies, I have brought under my yoke and subjugated their territories. I fought 60 kings . . . and established my victorious power over them. I was unequalled in battle, unrivalled in combat".¹ And yet this formula is more conservative than Hammurabi's corresponding phrases. While the words that the king has no equal in the heat of battle are in the tradition going right back to Sargon of Agade, Tiglathpileser and other great Assyrian kings keep up the fiction that the country belongs to the god Ashur, an idea which is really associated with the theocratic state only. When Tiglathpileser I attacks a country or a territory it is because the country has ceased to pay the tribute due to the god Ashur, and ceased to bring the gift due, and after the victory Tiglathpileser I says that he has subjected the enemies to his lord Ashur('s rule), he has counted them among the number of those who are submissive to Ashur, his lord.

Through the current conception of Assyria as the land of the god Ashur, a conception further emphasised by the maintenance of the *limmu* office (at any rate till 648, according to our lists), we have again noted a feature peculiar to the Assyrians as compared with the Babylonians, even though the Assyrian notion of kingship as an outward-directed secular supremacy is identical with and probably based on the Hammurabian model. But to this must further be added the fact that the Assyrian king's purely external aspect, his robes and head ornament, the court ceremonial, and the numerous court officials place the kingship on a level of greater isolation and simultaneous exaltedness than we know from the southern neighbour.

¹ Cyl. Inscr. I 46-58 (I R 9 ff. and AKA pp. 27 ff.).

The new king ascended the throne immediately after the death of the ruling king; we cannot speak with certainty of any law of succession until a later age. The highest officials superintended the king's investiture which took place in the throne room of the palace where, seated on his throne, the new king received the insignia of his dignity. All those present fell down before him and kissed his feet, invoking him as the father of the land, unequalled in battle. Representatives of the army chose him with the words, "This is our king".¹ Of the crowning ceremonies we have information from a text which is unfortunately badly preserved, but in the temple the king seems to have been anointed with oil, whereupon a superior priest put the royal diadem on his head with some such words as these: "The diadem round thy head means that Ashur and Enlil are the lords of thy diadem. May they protect thee for a hundred years, may thou (they?) take pleasure in thy foot in the temple, thy hands (touching, ritually officiating by?) Ashur, thy lord's altar. May thy priesthood, and thy sons' priesthood find favour with Ashur, thy god. May Ashur in the temple grant to thy sceptre and thy country speech, hearing, acceptance of thy prayer, law, and justice".² After this the new king returned to the palace where amongst other things he received gifts in the form of costly robes and fragrant oils for his anointment from emissaries from his extensive empire. But, as may be gathered from the chronological calculations of the annals, his actual accession did not take place until New Year of the next year when, taking part in the cult, identified with the god Ashur at the great *akītu* festival, he created fertility for the country and victories for the coming year; at the same time the king, as previously mentioned, entered upon his office as *limmu*. The Assyrian kings who in later times subdued Babylonia, were invested with their royal Babylonian dignity in the capital of that country at the "hand ceremony" previously described (see above p. 572), a ritual which had to be repeated each year in connection with the celebration of the New Year's festival in Babylon.

In relation to his subjects the king is in the first place the guardian of justice. "If the king is unmindful of the (enforcement of the) law the people will revolt and his country will be despoiled", we read.³ Hence the king is the supreme judge in the country and the last instance in

¹ F. Schmidtke, *Altorientalische Texte und Untersuchungen* 12 (1916), pp. 81 and 98.

² E. Ebeling, *Kellschrifttexte aus Assur religiösen Inhalts* 1 (1915-19), No. 135 (WVDOG XXVIII).

³ DT 1, Obv. 1 (CT XV (1902), Pl. 50).

all litigation, only on the five fixed unpropitious days of the month (the 7th, 14th, 19th, 21st, and 28th day) he must not pronounce any judgment in his capacity of ruler. The subjects have the right, and make use of this right, to appeal directly to the ruler of the country with their complaints, exactly as in Babylonia in the days of Hammurabi.

In Assyria we do not, as in Babylonia as a consequence of the Hammurabi state, meet with a kind of introduction of a state religion, for such a religion did in fact exist already with the northern neighbour, inextricably bound up with the king's person. The country belonged to the god Ashur, the king was his (and the other gods') representative and agent on earth, both in a secular and a religious respect. The annals of Ashurbanipal (668-626) begin with the statement: "I am Ashurbanipal, the work of Ashur and Nin-lil, the eldest son of the successor's house (*bît ri-du-u-ti*), whose name (the gods) Ashur and Sin, the lord of the tiara has appointed to the kingship from the early days, and whom they have formed in his mother's womb for the sway (lit. shepherd) over Assyria, and whom (the gods) Shamash, Adad, and Ishtar by their well-founded decision have ordered to carry out the ruler's task".¹ And at the conclusion of the introduction to the annal inscription we read: "After (the gods) Ashur, Sin, Shamash, Adad, Bêl, Nabû, Ishtar of Nineveh, Queen of Totality (?), Ishtar of Arbela, Ninurta, Nergal, and Nusku had caused me to seat myself on my father's throne, he who begot me, Adad sent his rain, Ea opened his wellsprings (so that) the corn grew five ells high in the straw, the ear became $\frac{5}{8}$ of an ell long, the fields abounded in heavy crops and constantly grew, the orchards yielded a rich harvest, the cattle successfully cast their young; in my reign there was great plenty; my years were full of great superabundance".²

Ashur and the rest of the gods were the patrons of the country, the fertility-giving powers, whose gifts the king husbanded, hence he was also the high priest of the country who communicated directly with the gods without any intermediary priesthood. There was indeed a large priesthood but it only served to keep up and carry out the details of the ritual. The central figure of the cult and the religion was the king, the state religion was manifested in his person.

¹ V R 1, 1-7.

² V R 1, 41-51.

Externally the great king appeared in robes of great magnificence befitting his secular and ecclesiastical supremacy. While the earliest city rulers from Assur were dressed like the Sumerians of Ur-Nina's time (c. 2459 B.C.), Assyrian fashions, at any rate after the time of Tiglathpileser I (c. 1100), went their own way. Over an undergarment provided with sleeves was worn an upper garment held together at the shoulders by bands and held in at the waist by a girdle or belt. The upper garment reached the feet, was without folds or pleats, but richly trimmed with fringes. The shoulders were often covered with a kind of dalmatic. On the head was worn a high fez-like cap which was richly decorated with patterns of bands, and ended in a point that looks as if it was put on separately. The feet were either naked or encased in sandals or stocking-like embroidered shoes. The gala attire must have been trimmed with coloured embroideries representing mythological themes. The hair and the long broad square beard were carefully anointed and combed, and except at sacrifices the king always wore a gala sword and dagger. At grand receptions he leans with his left hand on his bow while the right hand holds some arrows, or he sits on a carved throne with his bow in the left hand; a staff like a crook and the mace-like sceptre, gold necklaces, a breast ornament with seven kinds of precious stones, costly ear-rings, and bracelets are among the royal insignia.

To be admitted to the presence of the king was very difficult, the court ceremonial being very strict. Distinguished foreigners and natives seeking an audience could be turned away by the court functionaries, even princes had to await the pleasure of the ruler. Those who came to pay tribute were always admitted. Like all who sought an audience they had to prostrate themselves and kiss the ground before his feet or in special cases his feet. Only then could they rise and state their business to the king; to address him or converse with him was not possible to anybody.

On special occasions the king gave a banquet in his palace to the great dignitaries, e. g. after defeating enemies, or making conquests; when the new residence Dûr-Sharrukîn was taken into use; at the completion of certain building enterprises. But on ordinary occasions the king took his meals alone surrounded by the highest officials of the court and the heir apparent. The king arrived first, the others later, they kissed the ground and took their places, ready to wait on the sove-

reign. Braziers served to warm the hall on cold days, torches lighted it after sunset. After the meal, goblets were brought in, whose contents were drunk, while fragrant woods were burnt as incense. Later, in the harem, the king took a lighter meal in company with his consort, to the accompaniment of string music.

Out of doors the king travelled by chariot and was accompanied by the charioteer who guided the horses and by a courtier carrying a sunshade. Before and after the chariot ran guards and in certain cases foreign princes. Only on campaigns did the king waive his royal prerogative, and as the highest soldier of the army he shared in the hardships of his troops. Thus Sennacherib (705-681) says in his annals of the fifth campaign directed against the mountain dwellers east of the Tigris: "I had pitched my camp at the foot of the Nipur mountain and with my select body guard and my indomitable warriors I advanced like a strong wild ox. Gorges, mountain streams and cataracts, dangerous chasms I traversed in my palanquin. If it (i. e. the way up) were too precipitous for my palanquin I proceeded on foot. Like a young gazelle I ascended the high mountain peaks in pursuit of them (i. e. the enemy). Whenever my knees gave way under me I sat down on a rock and drank cold water from a waterskin (to quench) my thirst".¹ In times of peace hunting was an important pastime in the great king's life. Numerous are the representations of the royal feats in this field, and above on p. 17 Tiglathpileser I himself told us about his trophies of elephants and lions.

In the royal palace the person next in importance to the king was the queen mother. Thus the famous Sammuramat, who went down in history as the Semiramis of the ancients, ruled independently (809-806) during the minority of her son Adad-nirâri III. And Sennacherib's consort Naqi'a (Ass. Zakûtu) intervened when the succession was to be settled, and secured the throne for Esarhaddon (680-669), passing over his elder brother; and surviving Esarhaddon, she furthermore brought her influence to bear at Ashurbanipal's (668-626) succession to the throne. The queen mother had her own court with numerous functionaries and servants. "The lady of the palace" was the king's consort, the queen; she was of course the first lady of the palace and had her own chancellor's office, court functionaries, artisans and slaves,

¹ Taylor Cyl. III 71-80 (I R 37-42) = Oriental Institute Prism Inscr. III 80-IV 9 (D. D. Luckenbill, *OIP* II 1924).

but does not seem to have had any great political influence as the ageing queen mother might have. A large harem with the king's many concubines, partly recruited among defeated or dependent princes' daughters, was to be found with its staff of servants in a special part of the palace buildings.

The many royal children, who were the issue of the king's legitimate erotic diversions and who filled up the "women's house", were a constant source of intrigue and unrest, seeing that some of the numerous mothers were more enterprising than others and wished to secure the succession to their own sons. We have mentioned that Naqi'a passed over the eldest son whose name was Shamash-shum-ukin; Esarhaddon saw to it that he got Babylonia to rule over instead, but this became the germ of quarrels between the two kingdoms which ended in a catastrophe. As a rule the king designated his successor as crown prince already in his life-time. Most frequently it was the eldest son; he was given his own court and took part in the king's meals as well as in state affairs. The new king looked well after his younger brothers, that is to say those born of the same mother. Thus Ashurbanipal's (668-26) younger brother was given the office as Ashur's high priest, while the youngest became the god Sin's high priest.

At the king's death the whole country went into mourning and a number of ceremonies took place. Thus we know from a letter how on such an occasion the inhabitants of the city of Assur wept, the governor and his wife caused a lamb to be slaughtered while officers in mourning dress assembled at the house of the city governor where a male and some female singers chanted dirges. The dead king himself, after the completion of the funeral ceremonies, was taken to his resting place and the entrance was "sealed with bronze", after which an additional number of rites were performed at the mausoleum. From the transition to Persian times we have evidence that at the death of the queen mother there was public mourning for three days accompanied by ritual wailing; we may perhaps infer from this that the period of mourning for the king was not shorter.

Among the numerous court functionaries we shall only mention a few to convey an impression of the size and character of the court. The "palace steward" (*ša pân êkalli*) was at the head of everything concerning the royal household. By his side we have the chief cup-

bearer (*rab šákû*), the chief beer-pourer (*rab bappiri*), the chief baker, the chief cook, and the "anointment mixer" (? *abarakku*). In Neo-Assyrian times, after 745 B.C., these titles are, however, more like honorary titles referring to custom and usage at smaller courts, and those who hold them are seen to take part in the administration and command of the army. The same applies to the palace steward (*nágir êkalli*), and the grand vizier (*sukkallu dannu*) who was originally merely at the king's disposal for quite personal services. A high office was that of the "chief secretary" (*rab aba*), also called the "palace secretary" (*ab êkalli*), as well as that of the chief justice (*sartênu*). For the protection of his Royal Majesty there were officers and guards (*mutir* or *mutir pûti*). Among the lower court functionaries we may mention the messengers of the king (*mâr šipri* or *rakbu*) who might also be couriers (*allâku hanû*); interpreters (*turgumânu*); and not least the scribes (*lupšarru*), who especially looked after the king's foreign correspondence with Aramaean princes and Egyptian Pharaohs. Finally, we must mention that the king in his palace, in the temple as well as in his chariot, as we have previously stated, always had servants walking in front of and behind him (*âlik pâni, âlik urki?*).

§ 4. It was by virtue of the well organised, well equipped, and unyielding Assyrian army that the Assyrian kings from Tiglathpileser I's time (c. 1100) to the death of Ashurbanipal (626) extended the original Assyrian kingdom to include, besides Babylonia, Syria and Palestine and for a time Egypt, so that we are here concerned with a world empire which throws Hammurabi's realm entirely into the shade. The king was the commander-in-chief of the army, and as we learned above from the annals of Sennacherib, the king himself was at the head of his troops on the march and in battle. Of their strategic ability we have no means of judging. The masses of the levy summoned to arms and the excellence of the equipment, in connection with partial numerical superiority, no doubt ensured victory for the Assyrian arms. But the very building up of this army, which laid the world then known at the feet of the Assyrian kings, was an extraordinary achievement.

In the great period of the Neo-Assyrian era, when the territories brought under Assyria were steadily increasing, the need for soldiers in the form of battle troops, occupation troops, regular garrisoned soldiers etc., was exceedingly great, and it is obvious that the small home

country was unable to furnish the necessary contingents alone. Auxiliary troops were conscripted among the allies, just as the male population of conquered areas was enrolled in the army, and even military captives were enlisted in the king's troops. Thus Sennacherib procured an extra 10,000 archers for himself, and just as many shield-bearing soldiers, on his campaign against the "west country", and Ashurbanipal "added archers, shield-bearers, artisans, and armourers, who had been carried off from Elam as spoil, to his royal army".¹ That these captured foreign troops were not kept separate as special auxiliaries but were incorporated in the nucleus of the army seems to be indicated by a passage in the annals of Ashurnasirpal II (883-859): "I marched against Bit Bahiani. I received the tribute of the Bahianites: chariots provided with horses, silver, gold, lead, copper, copper vessels. The chariots, the horse and the foot I took with me".² The same is stated about the regions Ašalla and Bit Adini, and with his united forces Ashurnasirpal marched against Carchemish (*Gar-ga-miš*).

In Assyria itself every male who was able to bear arms was bound to enlist as a soldier at the command of the king. This applied to all, even to non-Assyrians who lived within the area of the Assyrian state as for instance in the mother country, the provinces, the conquered regions in the far west: only the allies had a definite agreement as to the contingents they were to supply. Besides this militia the Assyrian king had a permanent regular army, the "royal troop" (*kišir šarrûti*), by means of which he could intervene immediately and act with a speed, according to the circumstances of those days, which had its share in paralysing the enemy. This standing army was of course different from the king's personal lifeguards at the palace which, much smaller in number, served decorative purposes besides watching over the safety of the court. In large-scale military operations, however, the soldiers of the lifeguards are mentioned in connection with transports of war-captives, just as we see from Sennacherib's inscriptions that the king's lifeguards may form a crack regiment in the army.

The army consisted of the three kinds of soldiers mentioned above by Ashurnasirpal: chariotry, horse, and foot, the first arm being equally effective in attack and pursuit and yielding rich results in rapid raids. Tiglathpileser I (c. 1100) tells us in his annals that he increased the

¹ V R 7, 2-5.

² III 57-58 (AKA p. 363).

production of chariots so that it surpassed that of old times, "in order to strengthen my country" (*a-na e-muḫ māti-ia*).¹ The earliest Mesopotamian chariots we know date from Sumerian times and had massive wheels, solid circular discs of wood as we see them depicted on the "Standard" from the Ur I Dynasty. Prehistoric chariot wheels are known from Tell Halaf and Gawra. Owing to its costliness the chariotry naturally formed the smallest part of the army and was distributed among the other groups in definite contingents. Two massive wheels, as a rule provided with six spokes, carried the body of the chariot which on its outer sides was hung with quivers filled with arrows, a bow, and battle axes. In early times, three horses, two of them yoked and one as a reserve, belonged to every battle chariot, but in later times only two; the chariots were then made with larger wheels with eight spokes, and the backs and flanks of the horses were protected by a kind of armour of wool, while the weapons were placed on the inner side of the chariot-walls. Originally the chariot carried only two men: the charioteer and the archer, later the number was increased to three or four, a shield-bearer being included, amongst other things in order to protect the charioteers.

While horse-drawn vehicles were known among the early Assyrians, the Mitanni people, and the Hyksos of Egypt, and a more general use of battle chariots seems to date back to the time of Shalmaneser I (1280–1261), cavalry, on the other hand, is of later date: Ashurnasirpal is the first to mention this arm, but after this it was used much by the Assyrians and soon surpassed the chariot fighters in numbers. The horsemen rode without stirrups and on a blanket instead of a saddle; in later times both the horseman and the horse were protected by a kind of cloth armour. The weapons were a bow and a short sword, while the cavalryman was protected by greaves, a sugarloaf metal helmet, and a small shield. The cavalryman was accompanied by a mounted lancer who held the reins of his horse while he shot off his bow, and who shielded him from attack with his lance. In the later period the protecting lancer was given up and the horseman was now protected by a mail-coat. Archers remained the nucleus of the cavalry, lancers were more rare.

The infantry was composed of three arms: archers (*kašlu*), shield-bearers (*nāš ḫabābi*), and laneers (*nāš asmarāni*), and by far the greater

¹ Cyl. Inscr. VII 29 (AKA p. 92).

part were archers. The bow is characteristic as the specially Assyrian offensive weapon sending out arrows with annihilating effect from dashing chariots, galloping cavalry, or storming infantry. The other two kinds of infantry had the function of protecting the archers, partly by shields, which underwent changes in size and appearance during the constant Assyrian campaigns, partly by the lancers' throwing their spears in hand-to-hand fights. The archers were partly heavily armed, provided with a light iron mail-coat reaching their feet and with helmets protecting the neck, chiefly used in the siege of cities, partly armed only with a bow and arrows, a helmet varying in shape with the times, and a mail-coat to protect the body; on their feet they wore half-sandals. From the reliefs we see that one more arm was found among the infantry: slingers, but they are not mentioned in the cuneiform writings.

The advancing army was further joined by a kind of engineer forces, which in difficult situations solved various problems arising on the march. Thus Tiglathpileser I tells us "*u-ru-mi* trees, trees from the mountains, I hewed down, made the bridges for the advance of my troops strong, and crossed the Euphrates".¹ To this must finally be added the army service corps whose soldiers (*šāb ḥubši*) were recruited from the proletariat, and who attended to the making of provisional as well as permanent camps, pitched the tents (*zarātu*), prepared the provisions, carried with them extra stores of arrows, spears, extra horses, etc. The tents of the permanent camp were more solid than those of the provisional camps; they were held up by a ramified wooden pole and furnished with a roof covered with cloth. The size of a camp represented in a relief has been estimated at 160 × 100 metres or 1600 sq. metres. One representation of a camp shows it surrounded by a palisade with towers. The army service corps further brought with it the various types of besieging machines used to make breaches in the walls round the enemy cities. These machines, which were wheeled along, were provided with large battering rams, the mobility of which was accelerated by constant oscillations caused by many hands. It was their function to open breaches in the walls through which attacking troops could force their way into the city.

Concerning the size of the Assyrian field force we only once find accurate information, but if we are merely to some extent to rely on the numbers stated for the captured troops, these imply that the

¹ Cyl. Inscr. IV 68-71 (AKA pp. 65-66).

Assyrian army was of a considerable size. Thus Tiglathpileser I mentions 20,000 Mushkians as opponents, and Tiglathpileser III (745-27) speaks of a transport of prisoners numbering 60,500 men. Considering these two figures I disregard those given by Sargon and Sennacherib which exceed 200,000. The figures increase the farther we go down in time, and here as everywhere in antiquity it is very hard to know whether we dare rely on the statements of the texts. But we may mention that the governor of the province of Kunimuh (Tiglathpileser I: *kud₂-mu-ḫi*) according to the annals of Sargon II (721-705), contributed 150 chariots, 1500 cavalry, 20,000 archers and 10,000 (?) shield-bearers and spear-men as a contingent to the Assyrian army. In the light of this it seems possible to rely on the only information we possess of the size of the field force which is derived from Shalmaneser III (858-824) who states that in his war against the king of Damascus and his allies he mustered a force of 120,000 soldiers. Keeping in mind the world empire created by his successors: Tiglathpileser III, Sargon II, Sennacherib, Esarhaddon, and Ashurbanipal, it seems a reasonable presumption that the number of the field forces was further increased after Shalmaneser III.

The king and his deputy, the crown prince, were commanders-in-chief of the army but of course an army of this size needed officers of great insight and experience. The supreme commander of a detachment of the army had the title of *tartanu*, *turtannu*, and among these there was a distinction between the commander of the right and the commander of the left wing during advance and battle; the *turtannu*'s "second" seems to denote his chief-of-staff. Numerous degrees of officers must necessarily have been found in the large field force. We only know the title of "company captain" (*rab ḫiṣir*) who was at the head of from 100 to 200 men, and, further, designations such as *rab ḫanše* and *rab ešerit*, warrant officers who led respectively 50 and 10 soldiers. A "company" might be composed as follows: 1 chariot, 2 horses, 5 chariot fighters, 50 shield bearers, and 45 archers.

The supplies for officers and men were provided by the king in peace time; during campaigns they received a kind of pay through the spoil allotted to them. Even though we are always sceptical when faced with details of numbers we must, nevertheless, mention that Sennacherib (705-681), after his fourth campaign to Babylonia, gives

the following enormous spoils of war: 208,000 captives, men and women, 7,200 horses and mules, 11,073 asses, 5,230 camels, 80,050 head of cattle, and 800,100 sheep.¹ We are not told how this was distributed, but from Ashurbanipal's time (668-626) shortly after we hear that while the gods received a first fruit offering from the spoil and the king took his share, the rest of the plunder was divided between "the cities, the temples of the great gods, the governors, the great dignitaries (of the state), and my whole camp."² Or, as it is said after Ashurbanipal's victory over Elam: "At the command of (the god) Ashur and the supreme gods chariots, carts, horses, mules serving as draught animals, weapons, the whole battle equipment which the hands of the king had taken between Susa and the Ulai river was brought up from Elam with great rejoicing and to all the troops a gift was given".³

Uniform to monotony, through hundreds of years, is the formula in the annals of the Assyrian kings when the capture of a city is described: *aḫ-ḫur i-na girri aḫ-mu a-na tilli ū kar-me u-tir*, "I despoiled it, burnt it down with fire, and converted it into a heap of ruins and deserts", fruit trees and date palms were cut down and saltpetre and other substances, unknown to us, which hindered the growth of plants, were strewn over the land. The cattle was taken as spoil as well as the valuables of the inhabitants of the city. The city governor only was carried off to the capital of Assyria where after figuring in the triumph he was placed, with a ring through his nose or lips, in a cage by the city gate as an object of derision, afterwards suffering the fate of a rebel: i.e. having his hands, feet, nose, and ears cut off, and his tongue and his eyes torn out. The same fate was meted out to most of the captives during the massacre in the city, particularly evil enemies were skinned alive and the skin was distended on the city wall. The final death of the captives was accomplished either by cutting off their heads, after which these were piled in pyramids or hung in trees, while in the meanwhile the scribes noted down the numbers, or by impaling. An account from the first years of Shalmaneser III runs thus: "I mustered my chariots and weapons, I went through the Simesi passes, I drew near to Aridu,

¹ BM 113203, 60 (Sidney Smith, *The First Campaign of Sennacherib* ... 1921).

² V R 7, 6-8.

³ Ashurbanipal Cyl. B, V 1 3-9 (III R 32).

Ninni's royal city. I stormed and captured the town. Countless numbers of his warriors I killed. I carried off his spoil with me. I piled up a pyramid of heads in front of his city. Their children and young girls I burned in the flames."¹ The male inhabitants who survived the massacre were carried captive into slavery fettered with ropes, caltraps or forks and were put to all kinds of hard work in Assyria, amongst other things in the huge building enterprises of the Assyrian rulers. And as we have seen, large contingents of the captured able-bodied soldiers were even incorporated in the advancing Assyrian army.

In other cases the capturing of the enemy city and its ensuing total destruction and the massacre of the inhabitants were avoided by the conduct of its governor. Thus Tiglathpileser I tells us: "Confident of the help of my lord Ashur I marched out with my chariots and my warriors and besieged the city of Kibshuna, their royal city. The King of Ķumani, seized with terror when my mighty force advanced, embraced my feet. I spared his life. I commanded him to break down the great wall of the city . . . and from the foundation to the roofs he destroyed it and reduced it to a heap of ruins. Further, he drove out 300 rebellious families in the city who had not submitted to my lord Ashur and I received them. I took hostages from him and imposed a tribute and tax on him greater than (the) former one. And the great country of Ķumani, in its whole length and breadth I brought to subjection at my feet."² This practice of deportation in order to pacify the conquered area was eagerly pursued by Tiglathpileser III and by Sargon II and his successors; we know the fate of the ten Israelite tribes. The deported were often replaced by Assyrian colonists who in the farflung empire formed the backbone of the Assyrian expansion of power.

The conquered city areas, provinces, or countries either entered into an alliance with the Assyrian king and paid tribute or in an administrative respect became what we would call provinces. They were then, as the formula runs, "added to the bounds of Assyria" (*elī mi-šir māt Aššur^{kl} u-rad-di*), were administered by Assyrian functionaries, who adapted the administration to that of Assyria proper. External signs were the erection in the conquered area of symbols or statues of Assyrian gods with a stela of the ruling king by their

¹ Monolith Inscr. I 15-17 (III R 7).

² Cyl. Inscr. VI 22-38 (AKA pp. 80-82).

side. The provinces had three duties. They were to protect the mother country as extended boundaries, i.e. they served a strategic purpose. They were to supply certain agreed contingents of troops and of their own accord defend Ashur and the cause of the king against foreign attack. And finally, their tributes (*mandâti*) were one of the surest and most important sources of revenue of the state. From a list¹ we know the amount of tribute paid by certain cities and provinces to the Assyrian king; thus the great important city of Carchemish, one of the focal points of the caravan routes to Asia Minor, paid 100 *biltu* (talents) of silver and 2 *biltu* of gold, a *biltu* being 60 *manû* or 30.3 kilogrammes. The city of Arpad and the province of ẖu-e each paid 30 talents of silver, while the entries against two other cities are 15 talents of silver each.

§ 5. The Assyrian government officials were very numerous, and the public service was much ramified; above we mentioned the group round the palace and the king's person, the great dignitaries of the inner circle, as well as the more subordinate functionaries under them, so that the officials of the central administration have already been introduced to the reader. Among the provincial functionaries may be mentioned first the governor (*šaknu* or *bêl pâhâti*), who when the central government was weak had a fairly independent position. Below the governor came prefects (*akli*) and *šâpirûti*, secretaries of state; the cities had a ruler (*hazânu*) and a kind of mayor with the title *šâkin fêmi*, "he who gives orders, who issues commands". The two municipal functionaries could confer directly with the king. In remote districts, in Arabia and Egypt, the administration was in the hands of native princes paying tribute and dependent on the Assyrian king; as a kind of controlling functionary they had an Assyrian resident (*kêpu*) by their side.

The officials were recruited by the inner circle at the court from their acquaintances among the distinguished families of the country; and from the old days it was a tradition that an office remained within the same family. The installation into a higher office took place with a particular display of ceremony including investiture with the robes of office and the taking of the oath of office. Formally

¹ K. 276 (C. H. W. Johns, *Assyrian Deeds and Documents* II (1901), No. 951).

the king was the giver of the offices but there can be no doubt that certain offices were obtained through gifts and donations to some influential courtier. The newly appointed official recouped himself for expenses connected with the buying of his office by trying to gather several offices in his hand. If one of the high dignitaries succeeded in this, as we have evidence that some did, such a man might attain to an almost royal income and exercise of power.

Of these dignitaries we know little; from a letter¹ we have a kind of list of the incomes of certain high officials, but, unfortunately, we do not know how long a period of service (a year? a month? etc.) the figures in the list cover. The highest pay went to the commander-in-chief of the army who received 10 *manû* of silver (1 *manû* = $\frac{1}{2}$ kilogramme), five byssus garments, and five ordinary linen garments. After him came the chief counsellor among the king's entourage, who was paid 6 *manû* of silver and 3 and 2 garments of byssus and ordinary linen respectively. The other figures are as follows: the steward of the royal household 5 *manû*, 3:3 (robes); the chief cupbearer 4 *manû*, 3:3 (robes); the chief justice 3 *manû*, 3 byssus robes; the chief counsellor's deputy 3 *manû*, 3 byssus robes; the palace secretary received 1 *manû*, 1 byssus robe, and two rolls of parchment, while the house inspector and the holder of the reins (i.e. the charioteer) received 1 *manû* and 1 byssus robe each. Unfortunately we cannot say whether the sums stated in the letter are the salaries of the functionaries or whether they are perquisites coming to them from other sources. All that we can really determine from the scale of pay is the rank of the functionaries concerned. Most of them drew their pay from the fixed rent of plots of land in the provinces, which the king had decreed that their owners should be liable to pay to provide a regular salary for one or other official.

The central administration of the steadily growing Assyrian empire had its seat in the capital, and through the royal correspondence we can follow many of its details. Thus we possess more than 200 letters to Sargon, 152 to Išarhaddon, and 186 to Ashurbanipal, whereas none remain from Sennacherib's glorious reign, a fact which may perhaps be connected with the revolt at his court in the last years of his life, the obvious result of which was his assassination. It is a matter of course that an empire whose boundaries are extended from

¹ K. 956 (Harper VI (1902), No. 568).

decade to decade and which contains quite heterogeneous population-elements cannot possibly have had a firm administrative organisation, and that especially the provincial functionaries must have possessed great independent authority. The king in his capital was surrounded by a number of high dignitaries who acted as intermediaries between him and the government officials by means of messengers, and these saw to it that the king's orders and decisions reached remote parts of the empire as quickly as possible. Most of the letters to the Assyrian kings come from officials in the border regions. Thus from Sargon's reign we receive information about the movements of the troops in Urarṭu, reports on the activities of spies, the alliances of the enemy, and skirmishes on the frontiers etc. Later, after Sargon's death (705), the object of the reports was to give the king an impression of the situation in Babylonia, now united with Assyria, and there are accounts of the intrigues of Elam in the south etc. Or, in other words, so far as we can see, the king was especially interested in the security of the country, which was maintained by the armed forces. The Assyrian king, as commander-in-chief, was fully cognisant of the movements of his army and had the strategic insight which enabled him, on the basis of the reports coming in, to act at the right moment or to strengthen the garrison troops in one place or another.

§ 6. It is exceedingly difficult to form any idea of the finances of the empire, but it will easily be seen that the revenues were large. In the home country the population paid taxes and duties in silver, in kind, or in the shape of compulsory work; to this must be added the returns coming in from the extensive royal lands and palace grounds, the monthly or yearly tributes of the subdued peoples and countries, and finally the spoil of the army which at any rate as regards large parts of the cattle, which might be very considerable, fell to the treasury, just as the free labour which the captured civil prisoners from conquered countries gave as slaves was a fruitful source of revenue to the state. Against the background of these numerous and considerable sources of income it must be remembered that the expenses for the upkeep of the army and its equipment and for the pay of the numerous government officials made deep inroads into the exchequer. We gain some idea of how heavy was the burden

of taxation laid on the population through evidence of expatriation from the empire in order to escape it.

Certain large towns enjoyed special privileges. When we say so we are not thinking of the local self-government of the cities with which we meet throughout Assyria and which need not have been due to Babylonian influence. For we may take it for granted that the cities as regards their purely local affairs were in the earliest times throughout Mesopotamia governed by a council of the elders of the city families and likewise that this municipal local self-government was retained through the ages. In privileged cities, on the other hand, we are confronted with quite another thing, which is especially known from Sargon's time. Such cities are exempted from paying taxes to the empire and from supplying troops; their temples are not liable to pay dues, and they do not pay quay and bridge money into the exchequer. These "free cities" are a very interesting phenomenon in the Assyrian empire, but there is hardly any reason to compare their privileges to the political freedom in the Greek city-state, as done by A. T. Olmstead¹ and others after him. For it is not the city as such, but the citizens who enjoy the privileges, and a historical consideration of the rise of the "free cities" will give us a key to the understanding of this concept. For we do not hear of such privileges until the reign of Shalmaneser III (858-824).

With that ruler the Assyrian influence in Babylonia became of decisive importance for the kingdom in the south. We cannot get to the bottom of the reciprocal relations of the twin states, but the privileges bestowed by Shalmaneser on the neighbouring cities of Babylon and Borsippa seem to me to have a political background, a concession to the old culture state in the south, and at the same time an attempt to bind it with strong ties under the suzerainty of Assyria. Tiglath-pileser III (745-727) resumed his predecessor's policy towards the city of Babylon, while he let the North and South Countries form a personal union under his royal majesty, and did not reduce Babylonia to a province. A reaction set in under Shalmaneser V (726-722), who seems to have abolished the privileges granted by his predecessors and who even let the inhabitants of the old capital of his realm yield forced labour as if they were peasants. The great Sargon II (721-705), on the other hand, restored the "liberty" formerly en-

¹ *History of Assyria* (1923), pp. 525 ff.

joyed by Assur and Harran, and adopted the same policy in Babylonia where the cities were divided into two different kinds though it is impossible for us to probe into the nature of the difference. Sippar, Nippur, Babylon, and Borsippa again received the assurance that their inhabitants were "men with privileges",¹ while cities like Ur, Uruk, Eridu, and Larsa were exempted from taxes and were given self-government. Under Esarhaddon (680-669) we meet with similar statements in his building inscriptions; the citizens of Babylon have definite duties in contrast with the slaves who may be put to any kind of work and commanded to perform it. They have privileges and enjoy self-government, and in addition to these more general repeated statements we gain more positive knowledge when we read: "To the four quarters of the world, to all the winds of the realm, he opened their trade routes, so that they could trade with countries of all languages."² A free-trade monopoly not encumbered by taxes to the state thus seems to have been an essential privilege of the "free city". If we may suppose that the privileges from Sargon's time were also retained, that is to say exemption from taxes of any kind to the state, customs duties etc., cities such as Babylon, Nippur, Borsippa, and Sippar had an exceedingly favourable position. Outside Babylonia we only hear about Harran, the most important caravan centre in North Syria, and Assur, the first capital of the country, and I think that the freedom of the Assyrian "free cities" may most properly be regarded as a purely political measure dictated by many different considerations, into which prudence enters as an important element. It meant a loss to the state treasury, which was perhaps counterbalanced by a temporary loyalty which saved expenses connected with military campaigns. For in our estimate of the problem of the "free cities" it must not be forgotten that Tiglathpileser III, who renewed the privileges of Babylon, in his own country, Assyria, with a heavy hand abolished all the old privileges accorded to classes or cities in order to restore the finances of the state.

Apart from the enclave of the "free cities", not known until the period 858-669, the Assyrian state formed an administrative unit and had done so from the very beginning, in contrast with the southern neighbour which was only finally fused together under

¹ K. 4447 (Harper IX (1909), No. 926).

² Bu 88-5-12, 75 + 76, VII 38-42 (B. Meissner und P. Rost, *BA* III (1898), p. 325).

Hammurabi from a number of originally independent city-states. By the great additions of territory under Shalmaneser III the provinces by far surpassed Assyria in size and population, and the official authority of the provincial vicegerents (*šaknûli*) became as great as that of an Assyrian king. The element of danger inherent in this (revolts, alliances with the country's enemies) Tiglathpileser III later sought to avert in two ways. Partly he subdivided the larger areas of administration like the provinces into several smaller ones and at the same time appointed a controlling officer, "the second" (*šânûma*) who was to watch over the dispositions and actions of the vicegerent.

§ 7. The Assyrian community, like the Babylonian, was divided into three classes, the gentry, the free men, and the slaves. The position of the latter was in some degree freer than in Babylonia, since a slave could own personal property as well as plots of land, was able to give evidence at trials, and confirm business agreements which he made on his own account with his seal on written documents. Further, slaves enjoyed legal protection; a slave family was regarded as a unit, the single members of which could not be sold separately.

Our insight into the Assyrian judicial system and the laws regulating the interrelationship of the citizens is much more sparse than our corresponding knowledge of Babylonia, from which country we, as previously mentioned, have Hammurabi's comprehensive and systematic Code. But we have material enough to establish that Assyrian legislation was independent of that of the southern neighbour, and that on this point also the Assyrians show a culture of their own as compared with the Babylonians. Great addition was made to the three fragmentary clay tablets with ancient Assyrian law from the Kül Tepe period by the finding during the German excavations at Assur of nine tablets (A-I) which by virtue of their script and language may be assigned to the time about 1450-1250. They contain a copy of an official document, but the original can hardly be dated much farther back. While six of the tablets have brief texts and are very fragmentary, three of them contain respectively 59, 20, and 11 clauses of the law.¹ The contents of these 90

¹ As to details see G. R. Driver and John C. Miles, *The Assyrian Laws edited with Translation and Commentary* (1935), which is consulted in the following.

clauses show us with all plainness that we have not before us a copy of a collective code but perhaps an abstract or a fragment of such a code, four domains in particular coming under notice in these provisions: crimes and their punishments; the rights and duties of women; debts and their prosecution; and a number of provisions concerning landowners' rights. And we may add that within most of these domains special attention is devoted to the actions of women. In many cases, for instance in the section on crime, we may wonder why special reference is made to women but we can hardly properly speak of a special "law for women". It is clear that the nine law tablets from Assur do not originate from the same hand (A and B seem to belong together, just like C and G) and are not to be regarded as a collected copy of an abstract of the Assyrian Law of the Land.

In Chapter X we tried to give the reader an idea of Babylonian law and justice by so full a description that here we need only by a few examples show the character of Assyrian law, which in many respects reveals a similar line of thinking, and especially stress the principal points on which a difference in the idea of justice asserts itself. The outer framework of the judicial proceedings where the legal provisions are applied at the passing of sentences, are roughly identical with the Babylonian. The plaintiff "seizes" (*šabātu*) the lawbreaker and "brings" (*abātu*) him before the judges of the court (*daijānē*) who are always mentioned in the plural, and exercise the authority of the court through their decisions, which are proclaimed publicly but also, we may suppose, are handed as a written document to the two parties to the case, at any rate to the winner who "receives a tablet from the judges" (*tuppa ša daijānē iṣabat*). During the trial a husband may charge his wife and give evidence against her. Witnesses (*šibātu*) are always mentioned in the plural so that a number, not one, is required in each case. Where witnesses cannot be procured the ordeal is employed.

As a general characterisation it may be pointed out that the Assyrian penal law is more brutal and cruel than the Babylonian, and that the standing of woman in the community and her position in marriage are much more tied and inferior. To this must be added that the only Assyrian legal tradition we have lays more stress on sex offences than the Babylonian, though we cannot, therefore, erroneously draw any conclusion as to the superiority of the Assyrians over the

Babylonians in this particular. All three points will be exemplified below, though details can only in this connection be expected as regards the legal status of women.

Theft committed by a woman (of men's robbery or burglary we hear nothing) is thus dealt with in A § 5: "If a married woman has stolen something from another man's house and has taken property of a higher value than 5 *manû* (MA.NA) of lead, the owner of the stolen property is to swear and say: On my oath I did not allow her to take it, and: Theft has been committed from my house. If her husband will settle the matter he restores the stolen property and ransoms her and (thereafter) he shall cut off her ears. If her husband does not settle the matter by paying ransom the owner of the stolen property shall take her and cut off her nose."

The female thief is not of course a specifically Assyrian phenomenon, but it is interesting that we possess a kind of law code which is so detailed concerning the offences of women; similar rules might also be given in Babylonia but the characteristically Assyrian feature is that woman, on account of her inferior position in the community, has been kept under closer observation. Thus we read in A § 7: "If a woman has laid hands on a man (from parallel passages it appears that a sexual assault is meant) and complaint has been made of her, she shall pay 50 *manû* (MA.NA) of lead, and receive 20 stripes with a stick." Very special, but peculiar to the Mesopotamian outlook, as we shall see in Chapter XII, is A § 8: "If a woman has mutilated a man's testicle in a fight one of her fingers shall be cut off, and if, though a doctor has bound it up, the other testicle becomes inflamed or if she mutilates the other testicle in a fight both her breasts shall be torn off."

Marital unfaithfulness was regarded by the Assyrians, as by the Babylonians, with the greatest repugnance; however, the punishment among the former was more brutal. It is characteristic that A §§ 14-15 only mention the adultery of the married woman, and that coition between the lovers takes place either within the temple precincts (*bît altammu*) or in a public square (*ribitu*). If the deceived husband has his wife put to death her lover is to suffer the same fate, but if the husband merely cuts off his unfaithful wife's nose, her lover is to be castrated and his whole face is to be mutilated. Castration is employed in one more case, namely if a man has sexually polluted

another man (A § 20). The Babylonian law is very strict, especially in its application of the principle of retaliation, *lex talionis*, to crimes and offences, but the cutting off of the nose, lips, breasts or nipples, mutilation of the whole face and castration are unknown here. Flogging has been mentioned above as an Assyrian punishment for women (A § 7), it is also employed for men in connection with one month's labour for the king without pay in cases when a man, without being able to prove it, calls a woman a harlot, or calls a man the willing victim of a pederast (A §§ 18-19); both forms of punishment were unknown in Babylonia. As a final proof of the brutality of the Assyrian code we may mention that in A § 44 power of life and limb is freely accorded to the creditor over the debtor, whether man or woman, who lives in his house and has paid his debt with his person: "He (the creditor) may whip him, pull out his hair, he may mutilate or pierce his ears."

Finally it may be mentioned that the Assyrian code also knew and practised *lex talionis*, as in A §§ 50-52, where the punishment is stated for a man who (purposely or accidentally?) causes abortion by a blow aimed at a woman. Three cases are distinguished: the ill-treated woman may be a married woman, or a married woman who "does not let the children grow up" (*lâ murabîtu*); the third case is a prostitute. If it is a married woman the defendant's wife is to be treated in the same way, so that she too miscarries, "he pays (on the principle of) a life (for a life)"; if the ill-treated woman dies as a result of the miscarriage, the defendant likewise is to die: "He pays a life", it says again. The second case is more difficult to interpret since it is doubtful what we are to understand by a woman *la-a mu-ra-bi-la*. Are we to suppose, arguing from analogies in Hittite legislation, that the law takes into consideration the age and consequent viability of the fetus at the time when the defendant so brutally ill-treats the married woman, or should we take it, from purely linguistic criteria, that we have here to do with a woman who on account of bad health is unable to nurse her child or in other ways unable to protect and nourish it later during its first years? We do not know, but the punishment of the perpetrator of the outrage is estimated at two talents (*biltu*) of lead. We shall hardly be wrong in pointing out that the constant reference to lead as a legal tender for fines compared with the silver fines of Hammurabi's Code shows the lower economic standard of the Assyrians in the period

comprising the latter half of the 2nd millennium. In the third case which is concerned with a pregnant prostitute, the culprit is to be whipped to death "(thus) he pays on the principle of a life (for a life)."

It appears indirectly from the Assyrian laws that the conception of private property reigned supreme as it did in Babylonia in the time of Hammurabi. The aversion to and consequent severe punishment of adultery was not due to moral indignation but to the view that it meant an infringement of the proprietary right of the husband. This appears plainly from the close of A § 14 where it says: "If the man who lay with her did not know that she was a married woman (and therefore lay with her) he shall be free; the husband may charge his wife and treat her as he likes". Thus it is the property consideration which is the decisive point, not the forbidden pleasure.

From A §§ 55-56 it is seen with similar plainness that the father owns his virgin daughter, and that the married man who infringed the father's right by deflowering the daughter, as it says: in the town, in the open country, at night in the street, in a granary, or at a city festival, shall in return lose his proprietary right to his own wife who is to be given to the outraged father; the young daughter is to be married to her lover who gets her instead as a wife. "If the seducer has no wife he shall pay $\frac{1}{2}$ in silver of the price of the young girl to her father and her seducer shall marry her", this latter proceeding only with the father's consent, however; but under all circumstances the father is to have $\frac{1}{3}$ of the sum at which the girl is valued in silver.

In Assyria woman, as a daughter, wife, and mother, is a piece of property, a view which is in the sharpest contrast to what we encountered in Babylonia, and we have, therefore, spoken above of her inferior and very tied position in the North Country. The statutory veiling of the married woman when she is out-of-doors is dealt with in the longest Assyrian law clause which we know (A § 40). The wife's *pašānu* ("to cover, hide oneself with a veil") was a sensible measure, from the point of view of the husband, in a civilisation where, as we shall see, the sex life was given pre-eminence as in few other places in the world, and where man's lust was great and unbridled. And it is interesting to note in the same clause that those women who were not the property of a man (prostitutes, slave women) were not allowed to wear veils when they were out-of-doors. A concubine, who was also a chattel, on the other hand, was allowed to wear a veil when she was out of

doors in company with the wife. If a prostitute was caught wearing a veil, he who saw her was to arrest her and procure witnesses. She is not to be deprived of her jewels, but her garment goes to the person who seized her. She herself was to be given 50 stripes with a cane and have pitch poured on her head. The man who saw a veiled prostitute and did not report her, while another man did, was himself to receive 50 stripes, have his ears pierced, and work a full month for the king without pay. In cases concerning a veiled slave woman the procedure was the same, only she was not whipped but had her ears cut off.

This lengthy clause concerning the wife's veiling shows clearer than any other that it is attempted to protect the husband's property, his wife, against theft and robbery, through another man's desire. The married woman's position in the community as a piece of property further appears from the conclusion of A § 32, in which it is said that "she shall be liable for (any) debt and obligation or punishment which devolves on her husband"; she is part of the estate. In case of divorce she is entirely at the mercy of her husband: "If a man divorces his wife, if (it is) his will he can give her something, if (it is) not his will he shall not give her anything whatever, she shall go away empty (handed)" (A § 37). And upon the death of her husband she can claim nothing if the testator has not expressly decided it so; in those cases where there are no children left in the house the brothers of the defunct can take everything, even personal ornaments which the wife has received as gifts from her husband (A § 25). And if a wife, during her husband's illness or after his death, took something belonging to the estate and gave it either to a man or a woman (into their keeping or as a gift ?) then both the married woman or widow and the receiver were to be punished by death (A § 3) since such an action was identified with theft and the receiving of stolen goods.

§ 8. Here we shall finally give an outline of the political history of the Assyrians, which constitutes an important aspect of the life of the state; in connection with which we will also touch upon the history of Babylonia. Above on p. 574 we saw how Assyria gained independence already under Hammurabi's successor Samsu-iluna (1749-1712), but it was not until the Hittites conquered Babylon (1595) that it became possible for the Assyrian rulers to strengthen their position. The rule

of the Sea-Land Dynasty and the Kassites in Babylonia (see p. 576) must further have helped on the independence of Assyria and as a matter of fact we see that a certain Shamshi-Adad who ruled in Assur, in his inscriptions calls himself *šar kiššatim*, a title which from now onward to the fall of Niniveh is used by all Assyrian kings, and which may be translated "King of all the World". Later powerful Assyrian kings such as Sargon, Sennaeherib, Esarhaddon, and Ashurbanipal could justly assume that title: the area over which Shamshi-Adad ruled was considerably smaller, but large compared with that of his predecessors. In his city of Assur, he tells us, he received tribute (*biltu*) from the kings of Tukrish, from "the ruler of the upper country" (*šar ma-a-tim e-li-tim*), and stones inscribed with Shamshi-Adad's name were set up at the coast of the "great ocean" in the country of Labân.¹ We can localise Tukrish to the eastern areas by the Tigris towards Elam and would probably be right in looking for the rest of the vague localities in the northern Armenian highland, fixing our thoughts on Lake Van rather than Lebanon and the Mediterranean. But that the area over which Shamshi-Adad held sway also extended westward may be gathered from an inscription found in the mound Tell 'Ashârah, the old Tirkâ, southeast of the present-day Dair-az-Zûr by the Euphrates, to the north of the entry of the tributary Habur. This briefly relates that Shamshi-Adad built a temple to the god Dagan at Tirkâ, and shows us how far west his influence extended. From his other inscriptions it further appears that at his time Assur was a large well fortified city adorned by the great number of temples built at the command of the king.

The westward expansion of Assyria soon stopped, and many years were to pass before the Assyrians regained the position which Shamshi-Adad had won for his realm by conquests in the east, north, and west. Fresh power factors enter upon the stage of the Middle East, where previously only the Sumerian and Babylonian rulers had played their parts with varying success, while Egypt remained quiescent without any pretensions to territorial expansion in the north. It is the rise of the Hittite kingdom, the so-called Old Hittite realm (c. 1740-1460), which marks an epoch in the history of the Middle East. Its expansion from Asia Minor to Babylonia under Murshilish I in 1595 B.C. has been

¹ L. Messerschmidt, *Keilschrifttexte aus Assur historischen Inhalts* I (1911), No. 2 (WVDOG XVI).

discussed above; unrest at home seems to have been the cause of a speedy retreat to the homeland. But Egypt had begun to perceive the danger to the northern trade communications and wished to protect her northern frontier.

The ruling caste in the Hittite kingdom were, as already mentioned, Indo-Europeans, and we find these in two other places in the Middle East as rulers of territories whose populations were of quite a different character. The Kassites who conquered Babylonia when she had become weakened after the Hittite attack, came from the east, and from the names of persons and gods fashioned on an Indian model (Shuriasm, Maruttash) we see plainly that their rulers were Indo-Europeans. But in the region between Asia Minor and Assyria also, we meet with these peoples, new to the Middle East, whose external characteristic seems to have been the use of horses for their war chariot teams and as mounts, but we cannot date them. It was the discovery in 1887 in Tell el-Amarna of 358 letters to the Egyptian Pharaohs Amenophis III and Amenophis IV in the latter's old capital of Akuthaten, which first showed us the existence of a state in northern Syria with its centre near Tell Halaf, the old prehistoric site (see Chapter VII).

In 13 Amarna letters, one of which has been written, not in the Babylonian language but in the king's own language, addressed to the Egyptian Pharaohs, we see the rulers of the new state call themselves kings of Mitanni (*šar matu mi-i-il-ta-an-ni*). The Assyrians called the country and the kingdom Hanigalbat. Names of rulers such as Artatama, Artamanya, Shuwardata, Shubandu, Shutarna, show us that the rulers are Indo-Europeans. Names of gods such as Mitra, Uruwna (cp. Ind. Varuna), Indara (Ind. Indra), and Nashatti (Ind. Nâsatya) point unmistakably in the same direction. The population of the Mitannian kingdom, on the other hand, were Subarians (?) and Hurrians, as they are called by the Assyrians and Babylonians in the 2nd millennium. The area of the kingdom of Mitanni in some degree equates to the original area inhabited by the Hurrians. With its centre in the North Syrian Habur district and its capital Washshukanni near Tell Halaf it extends eastward, including part of Gutium in the Zagros Mountains with the city of Arrapha, present-day Kirkuk, as its principal town.

Unfortunately there is much that is obscure in the 2nd millennium. We do not know with certainty the causes of the rapid rise of Mitanni

in this period, but the Hittite kingdom in eastern Asia Minor seemed incapable of further expansion after the raid on Babylonia. At any rate, Saushshatar, king of Mitanni, conquered the whole of Assyria, and at the same time the newly formed state seems to have secured its western frontier by its friendly relations with Egypt. Thus we know that the daughter of Saushshatar's son Artatama I was given in marriage c. 1420 to Thothmes IV of Egypt; this empire had great interests in Palestine and the Lebanon regions to the south of the Mitannian frontier and seemed for the time being to have decided to await developments, reassured by the defensive attitude of the Hittites.

Names such as Saushshatar and Artatama I mark the culmination of the Mitannian kingdom. The reign of the latter's successor Shutarna II was followed by civil commotions resulting in the formation of the two states Mitannu and Hurri, the most important and largest of which retained the Mitannian name and had its centre in the Habur district. Tushratta of (the new) Mitannu who was contemporary with Amenophis III (1411-1375) of Egypt, like Saushshatar had Assyria as his dependency. We learn this with certainty from one of Tushratta's letters¹ to the Egyptian Pharaoh: "Thus speaks Ishtar of Nineveh, she who is the ruler of all the countries: To Egypt, to the land which I love, will I go . . . Behold, now I have sent her and she has gone . . . Would that my brother may honour her and rejoicing send her back and return . . ." Perhaps the reference is to the loan of an Ishtar statue which had the power of relieving the Pharaoh's morbid symptoms, and was to be returned to Tushratta after carrying out its healing mission. On the other hand, it appears very plainly that Assyria and its chief goddess belong to the Mitannian king who concludes his letter with the following words to the Pharaoh: "Ishtar is to me my god, but to my brother she is not his god". With these words he also expresses a reservation with regard to the healing power of the statue over the Pharaoh.

The great expansion of the so-called New Hittite realm (1460-c. 1200) in Syria at one stroke changed the whole political situation in Asia Minor. Egypt whose interest was centred on religious reforms, was at first feeble under Amenophis IV and only woke up to action with the powerful XIX. Dynasty (1350-1205). The vigorous Hittite king, Shuppiluliumash (c. 1375-1335 B.C.), allied himself with the Hurri

¹ J. A. Knudtzon, *Die El-Amarna-Tafeln* . . . I (1915), No. 23 (VAB II).

state and crushed Mitannu, whose capital Washshukkanni was captured, the king taking advantage partly of the bipartition of the old Mitanni kingdom, partly of the passivity of Egypt, to make himself master of Syria. The brilliant rise of the Hittite realm and its subsequent complete disappearance will be discussed later; here we may note that the disintegration of the mighty Mitannian state brought about the final liberation of Assyria from a foreign yoke.

§ 9. Ashur-uballiṣ (1380–1341) was the name of the Assyrian king who was associated with this event. He created the first Assyrian kingdom since the days of a certain Shamshi-Adad (see above p. 614), and we may add that after him Assyria retained her full independence. Ashur-uballiṣ's Assyria constitutes the fourth great power by the side of South Babylonia, the Hittite realm, and Egypt. Just as Tushratta of Mitannu formerly sent gifts to Pharaoh, as appears from the long Amarna letter No. 25,¹ thus also Ashur-uballiṣ sends gifts to Amenophis IV (Amarna letters Nos. 15–16), for instance a fine royal carriage with two white horses; and what is the most interesting, the Assyrian ruler regards himself as Hanigalbatean, i. e. Mitannian king. This must mean that the easternmost parts of the old Mitannian realm had been rendered subservient to Assyria, while the western Mitannu of Syria had become a Hittite dependency.

At this time Babylonia was ruled by the Kassites who, as the third dynasty after 1430, had gained the power over the whole of Babylonia by their victory over the "Sea-Land" Dynasty. That the Kassite kings regarded with distrust the independence and increasing power of northern Assyria appears with all plainness from Amarna letter No. 9, in which Burnaburiash II of Babylonia (c. 1360) complains to Amenophis IV because the latter receives (gifts from) the Assyrians and because the Pharaoh negotiates with them. It is clear that it is Ashur-uballiṣ's embassies which the writer has in mind. Burnaburiash II writes: "Assyrians, who are my subjects (*da-gi-il pa-ni-ia*) I have not sent to you, as they have themselves told you. Why have they come into your country? If you care for me you shall not make any agreement whatever with them. Let them return empty-handed". Fear of the growing influence of the North Country and vain boasting join company

¹ Here as in the following J. A. Knudtzon's above-cited edition of the Amarna letters is quoted or consulted.

in this letter to the Pharaoh, for since the days of Hammurabi, or about 400 years before Burnaburiash, the Assyrians had not been subservient to the Babylonian king. As a practical statesman Ashur-uballit took another course than Burnaburiash. He gave his daughter in marriage to a Babylonian prince and took care that his daughter's son ascended the throne of Babylon. This initiates Assyrian dynastic influence in Babylonia, often interrupted since, but in the later Assyrian period, as we shall presently see, absolutely triumphant with Tiglath-pileser III in 729.

Ashur-uballit's kingdom adjoined Shuppiluliumash's mighty Hittite realm which included Kizwatna (Cataonia to the Issus Gulf), Luya-Arzawa (West Cilicia), Lukka (Lycia), and Mitannu-Syria with the capital Hattushash, present-day Boghazkeui. The New as well as the Old Hittite realm seems to have suffered much from insurrections and dynastic conspiracies. Our sources are still too incomplete to give us a clear view, but after Shuppiluliumash's death a similar situation arose in the Hittite realm as after Murshilish I's capture of Babylon. And when the Hittite dynasty had gathered strength again, the powerful Pharaohs of the XIX. Dynasty had begun the Egyptian expansion towards Syria. In the battle of Kadesh 1286/5 the Hittite Muwattalish and Rameses II of Egypt fought a drawn battle in spite of the Egyptian announcements of victory, and the Hittites kept the important city of Carchemish, the ancient caravan centre between Asia Minor and Mesopotamia. According to the Egyptian sources the Hittite forces on this occasion were 3500 chariots and 20,000 men. Muwattalish's younger brother Hattushilish III finally, in 1269, concluded the famous peace treaty with Rameses II, which has been preserved both in the Egyptian and the Babylonian language, and which was further confirmed when some years later Rameses II married a daughter of Hattushilish.

The peace treaty of 1269 accorded no essential advantages to any of the parties, but gave a free hand to the Hittites with regard to the great power emerging in the east, the Assyrians. Ashur-uballit's successors' foreign policy aimed at keeping Babylonia in check so that they could expand westward; the Hittite dependency Mitannu was the first and nearest objective. Adad-nirâri I (1310-1281) had incorporated parts of Babylonia with Assyria and had then conquered the whole of the Mitannian territory as far as the Euphrates. The Hittites saw the growing danger and after the conclusion of the peace treaty with

Egypt in 1269, they could devote their energies to the task of reconquering the Mitannian land. They succeeded, and there was now a buffer state between them and Assyria.

But it was only for a short time that the Assyrian expansion could be stopped. Under Shalmaneser I (1280-61) who founded Kalhu (Kalah) as his residence near the Greater Zab and made it an impregnable fortress, more strongly fortified than the old capital of Assur, Mitannu was reconquered. The aggressive force of the Hittite realm ebbed away, while at the same time enemies attacked from the rear. Already under Shuppiluliumash the kings of Alhiyawa are mentioned, perhaps they are Hellenic Achaeans from Rhodes. About the year 1200 they overran Asia Minor, in the so-called Aegaeon migration, and under pressure of the arrival of new Indo-European peoples the Hittite realm vanished without leaving a trace.

That Assyria, under Tukulti-Ninurta I (1260-1232 or: 1234-1198), Shalmaneser's successor, experienced a period of unparalleled greatness was not unconnected with the incipient decline of the Hittite realm. Tukulti-Ninurta I retained control of his predecessor's conquest, the Mitannian area, but subsequently he penetrated to the important city of Carhemish west of the Euphrates, and in addition conquered Babylonia, so that the two Mesopotamian countries were now again united as in Hammurabi's time. About his victory over Babylonia (1241 or: 1215) he relates in a building inscription: "Trusting in Ashur, Enlil, and Shamash, the great Gods, my Lords, and with the aid of Ishtar, the Queen of Heaven and Earth, who went at the head of my army, I forced Kashtiliash of Kâr-Duniash (i. e. Babylon) to fight. I defeated his troops (and) overthrew(?) his soldiers. In the middle of the battle my own hand caught Kashtiliash, the Kassite king. My feet trod on his royal neck as on a footstool (*gallappu* or *kartappu*). Captive and bound I brought him before Ashur, my Lord. Sumer and Akkad to its farthest boundaries I brought under my sway."¹ Numerous building inscriptions testify that Tukulti-Ninurta also found time for the rebuilding of temples, of city walls, of new quarters in the cities of his realm. Like his father he further built a new residence northeast of Assur, Kâr-Tukulti-Ninurta.

With Tukulti-Ninurta Assyria became the leading power of the Middle

¹ O. Schroeder, *Kellschrifttexte aus Assur historischen Inhalts* II (1922), No. 58 (WVDOG XXXVII).

East; one generation after him the Hittite kingdom perished and at the same time there was an end of Egypt as a great power. For a number of years Ashur-uballi's successors, watchful of the Near Eastern constellations of power, had purposefully extended the Assyrian state till it had become an empire of dimensions surpassing any Sumerian or Babylonian dominion. We feel the pride in the completed work expressed in Tukulti-Ninurta I's long series of titles: "Tukulti-Ninurta, king of the world (*šar kiššati*), king of Assyria, king of the four quarters of the world (*šar kib-rat irbit-lim*), sun of all the nations, the mighty king of Kār-Duniash (i. e. Babylon), king of Sumer and Akkad, king of the upper and lower sea, king of the mountains, king of the great plains, king of Šubari (and) Kutī, and king of all the Nairi lands . . ."¹ After him the main components of this series of titles recur in the titles of all Assyrian kings.

Twice Babylonia rose against Tukulti-Ninurta I, the situation was too unprecedented. Babylonia was an ancient civilised state with glorious memories from Sumerian times and the Hammurabi Period, whereas Assyria was an upstart. The first rising was put down with much bloodshed; the walls of Babylon were pulled down, its citizens massacred in great numbers, the treasures of Esagila, the temple to Marduk, were carried off with the other riches of the town, and even Marduk's sacred statue was carried out of the country to Assyria. The second rising was brought to a successful close. Babylonia again became independent, and Tukulti-Ninurta was murdered by his own son (1232 or: 1198 B.C.).

Assyria now seems to have kept its hands off Babylonia for rather more than a century, in which period from 1164–1033, the IV. Babylonian Dynasty (Isin II) replaced the Kassite Dynasty, which had been overthrown in 1165 by Shutruk-Nahhunte I of Elam, who for a short time held sway over Babylonia. Isin II had a few powerful kings such as Nebuchadnezzar I (1140–1117) who waged successful campaigns against Elam and for a time even controlled Assyria. But under Ashur-rêsh-ishi (1127–1116) Assyria became independent of Babylonia, and his son Tiglathpileser I (1115–1093 or: 1116–1078) deliberately resumed Tukulti-Ninurta I's policy. First he conquered Babylonia so as to guard against attacks in the rear, and then started a far-seeing expansion policy towards the west, not stopping

¹ O. Schroeder, *ibid.* No. 58.

at Carchemish this time, but carried on to the Mediterranean, southward to the oasis of Tadmur, the Palmyra of later times. Tiglathpileser I's enemies in the west were the Ahlamu (Aramaean) tribes, the third and last of the Semitic invaders in Mesopotamia. From the Amarna letters we know of their existence in the Syrian desert round about the year 1400 B.C., but the downfall of the Hittite kingdom gave them an opportunity to form small states in former Hittite and Mitannian territories. In the time of Tiglathpileser I the organisation and coalescing ability of these small states were still embryonic, so that he was able to subdue them. But in the period from this ruler's death to 911, or for about 200 years, when Assyria had a period of weakness, all the Assyrian conquests in Syria and the extreme west were lost, while Babylonia regained her independence and the Ahlamu states grew strong.

We lack all knowledge of the causes of Assyria's decline in power at each new period. The first time we ascertained such a decline, in the period from a certain Shamshi-Adad to Ashur-uballit (1380), we could with perfect justice point to the new Mitannian kingdom in Syria as a reasonable explanation; as to the other three dark ages of Assyrian history (1232 (or 1198)–1127, 1093 (or 1078)–911, and 824–745) we have to fall back on conjectures as to internal unrest, weak rulers and the like, no special foreign political events in the Middle East being apparently of any great importance.

§ 10. The great progress of Assyria begins with Adad-nirâri II (911–891). With respect to foreign policy the Assyrian tradition was fixed: first security against attacks from the rear, i. e. Babylonia crushed and dependent, then a westward thrust to open the way to the rich metal deposits of Asia Minor and to procure revenue from tribute-paying peoples. It is most interesting to learn from the king's long annalistic inscription at the close of which an account is given of the restoration of the Gula temple, that he was well-prepared when he proceeded to the tasks he had set himself in foreign policy. The prerequisite for a successful expansion is the prosperity of the mother country; and a well-planned increase in the agricultural yield of Assyria must have been Adad-nirâri's aim, the foundation which was to defray the expenses of his campaigns. He says: "I built palaces throughout my country. Ploughs I caused to be made in all my country. The piles

of corn I allowed to grow far more than those of the old days, I stored them. Throughout my country I provided draught-horses."¹

With this secure agricultural backing Adad-nirâri II began his conquests. Babylonia was subjugated, its king deposed, and a peace treaty drafted which brought Assyria land south of the Lesser Zâb, where inter alia Kirkuk is now situated. On the west, as the first barrier to expansion, there were the remains of the old kingdom of Ḫanigalbat (see p. 615) in a strong position with the city of Našibina (Nisibis) as its centre. The population were Ḫurrians with a large admixture of Aramaeans. The sixth campaign against Ḫanigalbat ended in the capture of the capital. Adad-nirâri's son, Tukulti-Ninurta II (890-884), continued to assert Assyrian power by campaigns against the Ḫurritic Nairi states north-east of the Ḫanigalbat area and southwest of Lake Van; his next advance was south of Ḫanigalbat along the river Ḫabur against cities under Aramaean rulers, situated in the Bit Adini area between the upper Euphrates and its tributary Balih.

His son Ashurnasirpal (II) (883-859) reaped the benefits of his predecessors' campaigns, and by an extraordinary military effort manifested in continual campaigns in the east, north, and west, he not only secured the conquests of his predecessors but also added new ones. Of these may be mentioned the Nairi states and the whole of the Ḫabur area. The Mediterranean was reached on these extensive campaigns. Near this part was the strong Aramaean city of Dimashki (Damascus), against which Ashurnasirpal did not try his strength. The very great military successes of this ruler of the Assyrians were due to a complete reorganisation of the armed forces, in which inter alia cavalry was first used, as well as ambulant battering rams and other engines for sieges. The western boundary of Assyria now ran along a line from Lake Van over Nisibis to and including the Ḫabur area, and what is more, these areas were now securely within the grasp of the Assyrian king.

When Shalmaneser III (858-824) took over the government a new power factor had grown strong, namely the Urarṭu state (Ḫaldia), on the other side of Lake Van in the Armenian highland; the language of the population was Ḫurritic. It is interesting to note that the Mesopotamian population in the south, the Sumerians, disappear

¹ O. Schroeder, *Keilschrifttexte aus Assur historischen Inhalts* II (1922), No. 84 (WVDOG XXXVII).

after the year 2000 B.C., politically as well as ethnically, whereas the Hurrians in the north, though led by and mixed with Indo-European or Semitic Aramaean peoples still survive right down into the first millennium B.C., forming states such as Mitanni-Hanigalbat, Nairi, and Urarṭu. When Shalmaneser III feared an expansion of Urarṭu in the south-west which might cause the western Assyrian provinces to revolt, he made several successful campaigns against Urarṭu and amongst other parts stormed the important city of Arzashkun (856). In this way he had secured his northern flank and continued his predecessors' expansion westward by subduing the Bit Adini area. He then began his attempt to reduce the Aramaean great power, Damascus, by a siege. In this he failed, while the whole Palestinian coast of the Mediterranean and the regions abounding in silver near the north-east Mediterranean (Tabal, ẖu-e with Tarsus) became tributaries. An insurrection in Babylonia, on the southern part of which Aramaean armed bands made devastating raids, caused Shalmaneser III to interfere. The land was cleared of bands of robbers and made subject to Assyria. Mesopotamia was again united under one ruler, and Shalmaneser III could now contemplate an empire which no Mesopotamian ruler before him had controlled. In the inscription on the Black Obelisk he has enumerated his glorious victories, and the famous bronze reliefs of Balāwāt which ornamented the gate to his newly built palace in the old Imgur-Enlil, 25 km south-east of Mosul, give us an excellent insight into the events of his campaigns.

In his last years Shalmaneser III experienced a civil war lasting three years, and saw 27 of the districts of his country in revolt. Then follows the last, obscure, period in the history of Assyria, the period 824-745. The facts we can ascertain from this period are as follows: Babylonia, which seems to have assisted in putting down the Assyrian insurrection, again made itself independent; the Assyrian provincial governors too often emancipated themselves from the central government in independent or rebellious action. The successors of Shalmaneser III were involved in continual struggles with Damascus, with Babylonia, and with Urarṭu, which had grown strong again in the north-east, as well as with the Indo-European Medes who had invaded western Iran and were beginning to assert themselves. A single gleam of light comes from the female ruler Sammuramat

(809-06), the legendary Semiramis of Antiquity, who during her regency for her son added the Guzana area between Habur and Bit Adini to Assyria as a province.

§ 11. The last brilliant period of Assyria, the Neo-Assyrian period (745-612), begins with Tiglathpileser III (745-727). The foreign political situation was as follows: from the time of Adad-nirâri II to the present the western bridge to the Mediterranean was secured through the conquest of the Nairî states, Hanigalbat with Nisibis, the Habur territory, Guzana, and Bit Adini. Further, Babylonia was no longer a dangerous enemy. The Aramaean hordes had completely broken the power of the old culture state. The only antagonists left were Uraîtu in the north-east and Damascus in the south-west. Tiglathpileser III, before he proceeded to attack the last two important enemies of the empire, seems to have introduced extensive reforms in his country with the aim of abolishing the privileges of the "nobility and priesthood". The major offices of the governors were broken up into a great number of minor offices. In this way he countered the danger of insurrection from independent state officials. Further, mass deportation of the civil population from captured areas and provinces was introduced, likewise to guard against revolt, the deported persons being replaced by Assyrian colonists. Finally, we may mention that Tiglathpileser III like Adad-nirâri II, the founder of Assyria's increase in power, actively encouraged agriculture and helped the rural population against the encroachments of the priests.

Tiglathpileser III started his foreign policy by putting down the Aramaean nuisance in Babylonia. Strong Assyrian defences were built there, Assyrian governors were placed in control, and a nominal king was formally in residence. Uraîtu was reduced by successful campaigns, though the capital Turushpa at Lake Van was besieged with no other result than inspiring the inhabitants with a wholesome terror of the Assyrian king. In the north-west the Aramaean states between Bit Adini and the Mediterranean, i.e. Arpad and Unî near present-day Antiochia, were made into Assyrian provinces, by which the control of northern Syria and the Palestine coast of the Mediterranean was secured, and finally Damascus in the south-west was reduced. The domain of the Assyrian king extended from Lake Van

in Armenia to the Mediterranean, and in the last three years of his reign even to the Persian Gulf, for a revolt in Babylonia gave Tiglathpileser III an opportunity of subduing the country, and under the name of Pûlu he ascended the throne of Babylon in 729. Babylonia and Assyria were now in a personal union.

Sargon II (721–705) encountered a new situation in foreign policy. Babylonia raised the banner of freedom and received help from Elam which had for hundreds of years been independent of Mesopotamian power, but on the other hand had had its area reduced in western Iran by the invading Medes and Persians. At the same time Egypt lent support to an insurrection among the North Syrian dependencies, such as Hamath (Hama) and Arpad, besides Gaza and Israel. Two new great powers in the extreme east and the extreme west, Elam and Egypt, suddenly brought themselves into notice and threatened the Assyrian empire, acquired through such a long period of warfare. Sargon was defeated at Dêr (Dûr-ilu) in the war against the Elamites, who had hastened to the aid of the Babylonians. The result was that the whole of Syria broke into revolt and was supported by Egypt. Lightning-swift action by means of forced marches brought Sargon an overwhelming victory over the Syrian coalition; inter alia Israel's 27,290 inhabitants were deported to Syria and Assyria, and the Egyptian auxiliary forces were beaten. Later Carhemish, the last Hittite enclave in Syria, was made a province (717), while small sovereigns in Asia Minor, as for instance Midas of Mushki, were subjugated.

After this Sargon turned to the north against the vassal states of Urarju and subdued these; the great reckoning between Assyria and Urarju did not take place, however, since the Cimmerians (Bab. *Gi-mir-ra-a-a*), Iranian bowmen, on arrival in the regions of Urarju put the latter out of the running as a power factor. It now remained for Sargon to seek vengeance for his defeat at Dêr; this happened at Dûr-lakin in South Babylonia in 709, after Sargon had ascended the throne of Babylonia the year before. The Babylonian king, the Chaldean Merodach-baladan, who this time was deserted by Elam, long held Dûr-lakin by means of inundations after the downfall of the capital Babylon, but at last he was obliged to flee with his chiefs to Elam. Like Tiglathpileser III and Shalmaneser V (726–722), Sargon was again master of all Mesopotamia, and both Elam and

Egypt had for the time being lost all relish for interfering in the Assyrian king's military operations or provincial government. In size his empire was similar to that of Tiglathpileser III, but besides this he controlled Urartuan districts around Lake Van and about the year 710 received tribute from Cyprus (Ass. *Ja-at-na-na*), so that this area may be regarded as a dependency.

Sargon built a new residence Dûr-Sharrukîn, "Sargon's Castle", about 20 km north-east of Nineveh, the present-day Khorsabad, where with the excavations of Paul Émile Botta, started in March 1843, Assyriology came into existence. The splendid French excavation results telling of the palace of the great Assyrian king and its arrangement, created an enormous interest in the Mesopotamian cultures, which before that time had only been known from statements in the Old Testament and in classical authors. The erection of a palace for the great king within the city area was the main object and we may perhaps conclude that the rest of the larger blocks of buildings served the purposes of the central administration. The city itself was situated on a rocky terrain and was surrounded by a city wall more than 8 km long, having 8 gates. The population which was deported to this place was from "the four quarters of the world",¹ they spoke "differently and in a foreign tongue",¹ and came from mountainous country as well as plains. This mixed population was governed by Assyrians. "I sent to them as scribes and superintendents Assyrians who were cunning of insight (lit.: of eye) to teach them to fear God and the King."¹

As to the time when Dûr-Sharrukîn was founded, or when the building operations were finished, we are unable to say anything with certainty. According to the evidence of some texts, the great enterprise seems to have been started after the conquest of Babylon. "At that time I built a city with (the aid of) the people (who came) from the countries which (the gods) Ashur, Nabû, and Marduk had brought to subjection at my feet and which my hands had conquered so that they pulled my yoke, at the base of the mountain Musri above Nineveh . . . and I called its name Dûr-Sharrukîn."² Slave labour

¹ Sargon Pomp Inscr. (Saloon XIV), 49-53 (F. H. Weissbach, *ZDMG* LXXII (1918), pp. 182, 184).

² Sargon Pomp Inscr. (Saloons IV, VII, VIII, X), 153-55 (F. E. Peiser, *KB* II (1890), p. 74).

from the whole of the empire contributed to the swift progress of the construction. "A palace of ivory, maple (?), box, *musûkkânu*, cedar, cypress, juniper, pine and pistachio, "the palace without a rival", I caused to be erected there as my royal residence. On the top of (?) dedication tablets of gold, silver, lapis lazuli, jasper, alabaster, bronze, lead, iron, and magnesite I laid the foundation platforms (of the various palaces) and built up brick buildings which I roofed with huge beams of cedar. The leaves of the doors made of cypress and plane (?) I covered with shining bronze and fixed them firmly in their gateways. In front of the gates I built a portico like that of a Hittite palace called *bît hillâni* in "west country" language. (I placed) 8 lions, two and two, which weighed (?) 4610 talents (c. 140 tons), they were made according to Nin-a-gal's method of casting (?) and were of a splendid brightness; 4 cedar columns, very tall and each 1 GAR (c. 6 metres) in circumference, the growth of the mountain Amanus (*Hâ-ma-ni*), I placed on the top of the lion colossi as door jambs (?) to support the gateways (?) . . . (and) grandiose *lamasâti* I caused to be made with great cunning out of large blocks of mountain stone and erected them as powerful tutelary deities facing the four quarters of the world to decorate the entrances. On large limestone tiles I caused the cities to be represented which my hands had captured and erected them where, set in the walls, they were displayed to the wondering gaze."¹ From M. von Oppenheim's reconstruction of Kapara's palace² from the Tell Halaf excavations (1911-13) we may perhaps gain an impression of such a *bît hillâni* building, only we see from Sargon's above-cited inscription that the dimensions of Dûr-Sharrukîn were much larger, and that instead of the statues placed on the lions and ox in Kapara's palace the Assyrians had colossal cedar pillars.

The completion of the huge building was celebrated by a feast with the performance of music. Vessels of gold and silver, precious stones, bronze, fragrant oils, magnificent woollen and linen garments, ivory . . . and large Egyptian horses . . . were among the gifts of homage which "worthy of these palaces" were sent to Dûr-Sharrukîn's inauguration by "sovereigns (living) at the rise of the sun and the setting of the sun."³

¹ *Ibid.* 158-165.

² M. v. Oppenheim, *Der Tell Halaf* . . . (1931).

³ Sargon Bull Inscr. 99 (D. G. Lyon, *AB V* (1883), pp. 18).

§ 12. Sargon met with his death in a minor border fight. His son, Sennacherib (705-681) encountered open revolt in his empire at his accession, caused by the news that the great king had fallen in battle. By desperate fighting Sennacherib was able to keep the empire he had inherited from his father. The greatest difficulties were met with in Babylonia which had the strong support of Elam. The revolt in the southern state was put down in the battles of Kutha and Kish in spite of 80,000 Elamite auxiliaries, and Babylonia was divided into four provinces under a vicegerent, the Babylonian Bêl-ibni. In the west, where the insurgents received help from Egypt, Sennacherib was victorious everywhere. Sidon, Askalon, and Ekron fell, the Phœnician and Philistine territories were subdued, the Cilician revolt was put down, Jerusalem was besieged. A fresh insurrection at home claimed the presence of Sennacherib; he left his western provinces, put an end to the revolt, and made his son vicegerent of Babylonia, which was a centre of perpetual disaffection.

In the meantime the Elamites had gathered strength after their defeat at Kutha in the first year of Sennacherib's reign. They invaded North Babylonia, captured and killed Sennacherib's son, and allying themselves with the Babylonians defeated Sennacherib at Halule in 691. Thus the so-called Babylonian Chronicle B (84,2-11,356) says: "At a date unknown Menanu summoned to arms the forces of Elam and Akkad (i. e. Babylonia), attacked the Assyrian army at Halule and inflicted a signal defeat on Assyria."¹ Sennacherib's own inscriptions do not give us that impression; in drastic turns of phrase he describes the flight of the Elamites: "They left their tents and in order to save their lives they trampled on the bodies of their (fallen) soldiers, they fled like young pigeons which lose courage when they are pursued; their hearts were divided and they forced (? one would expect: passed) their water, and they let their excrements pass in their chariots."²

That Sennacherib suffered a defeat at Halule is, on the other hand, apparent from the events that followed. Two years later, in 689, he led an immense army against Babylonia and won a complete victory. So as to put an end once for all to the Babylonian problem, which was a source of constant unrest in the Assyrian empire, he wiped

¹ 111 16-18 (Th. G. Pinches, *JRAS* N. S. XIX (1887), p. 661).

² Sennacherib Taylor Cyl. VI 17-21 (I R 37-42).

the great city of Babylon from the face of the earth by fire, completely demolishing its building complexes and private dwelling-houses; above, on pp. 10–11 we have described this terror in Sennacherib's own words. No more thorough piece or work of this kind is known, for as Sennacherib says: "after I had destroyed Babylon, smashed its gods and massacred its population, I tore up its soil . . . (cast it) in the Euphrates, and allowed it to be carried (by the waters) out to sea. The masses of its soil reached Dilmun (i. e. the island of Bahrain in the Persian Gulf) and the people of Dilmun saw them and were struck with terror and dread of Ashur, and brought me their tribute."¹

The unusually hard-handed way in which Sennacherib solved the Babylonian problem must not let us forget that this ruler of the Assyrians has also given posterity cause to remember him in another way. Right back to the time of Adad-nirâri I (1310–1281) we have evidence of the extensive building activities of the Assyrian kings whose interest centred especially round temple and palace buildings. Shalmaneser I's foundation of Kalhu was mentioned at p. 619, and "Sargon's Castle" was referred to above. Sennacherib made Nineveh his residence, and from the results of the excavations we may divine its grandeur and magnificence. But further the king provided artificial irrigation by the Jerwân aqueduct, the vast construction mentioned in Chapter I, and thus brought fertility to the immediate vicinity of Nineveh. To this must be added that Sennacherib took a lively interest in cultural improvements of every kind. Thus he tells us in one of his inscriptions how he has invented an easier method of casting objects in bronze so that large works in this metal could be executed "as no royal predecessor before me had formed them";² for this was partly used planks and a frame of wood, and partly he "made a mould of clay and poured the bronze into it."³ Within agriculture he introduced improvements by using a new technique for drawing water, "in order that there might be plenty of water in the (baling) pails every day, I had copper cables made and (copper) pails, and above the well I put up planks and cross beams instead of the earlier (brick) pillars."⁴ The reference is to a new placing of

¹ VA 8248, 36–11 (O. Schroeder, *Keilschrifttexte aus Assur historischen Inhalts* 11 (1922), No. 122 (VWDOG XXXV11)).

² BM 103000, VI 92–93 (CT XXV1 1909).

³ *Ibid.* VII 16–17.

⁴ *Ibid.* VII 45–49.

the draw beam necessary for drawing up water. Finally Sennacherib seems to have been the first to introduce and derive benefit from the cotton plant. He tells us about it in these words: "Above the city and below the city I laid out great parks . . . herbs and fruit trees I planted for my subjects (?) . . . The trees bearing wool they picked and then they beat (i. e. wove) it into cloth."¹

Only in very few cases of the ancient Mesopotamian history have we direct evidence that the influence emanating from the harem might have consequences in foreign politics; we seldom arrive at an intimate knowledge of the intrigues within the palace of the great king. But we know that one of Sennacherib's concubines Naqī'a (Ass. Zakûtu) had so great an influence on the king that he appointed her son Esarhaddon as his successor. As a result of this two of his elder brothers murdered Sennacherib in 681 after a long period of struggles and plotting, and rose in revolt, only to be finally defeated, however, by Esarhaddon's army at Nisibis.

§ 13. This ruler, in the course of his short reign of only 12 years (680-669) added a new leaf to the book of Assyrian conquests. Throughout the country there was peace and general subjection after the victory at Nisibis. It was only on the soil of Urarṭu which, as previously mentioned, the Cimmerians had invaded, that small engagements were still fought. Peaceful relations had been established with Elam. Thus Esarhaddon could concentrate his whole military power on securing his western possessions for good by the subjection of Egypt. In the year 675 the vast undertaking was stopped by sand storms at the Sinai peninsula, but in 671 Taharka (Ass. Tarḫû) of Egypt was defeated. Esarhaddon tells the story of the defeat on the Senjirli stela: "on him (i. e. Tarḫû, here he means his people) I fell daily with incessant slaughter from the city of Ishḫupri to the royal city of Memphis, a stretch of 15 days' march . . . I surrounded Memphis and captured it in half a day by means of breaches in the walls, devastating shooting, and scaling ladders. I spoiled and ravaged it, I caused it to be consumed by fire. His consort, the ladies of his harem, his legitimate son and heir, Ushanahuru, and his other sons and daughters, his goods and possessions, his horses, his cattle, his

¹ BM 103000, VIII 16-64 (CT XXVI, 1909).

sheep I carried away as untold spoil to Assyria. I rooted out Kùsi (Ethiopia) from Egypt and no one in it escaped (death), that it might be subservient to me. Throughout Egypt I appointed new kings, vicegerents, governors, commandants, sheriffs and scribes. For Ashur and the great gods I established sacrifices and fixed dues for all time, and I imposed on them (i. e. the Egyptians) royal tribute and taxes, annually without end."¹

With Egypt as a tributary province the Assyrian empire now covered an area of unprecedented extent. After this glorious military exploit Esarhaddon devoted himself to large-scale building operations at Assur as well as in his residence of Nineveh, but in addition he also began to rebuild Babylon. A reversal of the Assyrian view of Babylonia now becomes apparent. Revenge and despoilment are given up and restoration and preservation of the great agrarian-economic values of the country are now foremost among the king's plans.

At the death of Esarhaddon Naqi'a, the queen mother seems once more to have interfered in favour of the youngest son, Ashurbanipal (668-626), who ascended the imperial throne, while the eldest, Shamash-shum-ukin became king of Babylonia (668-648). This was a new idea, ever since the time of Tiglathpileser III, 729, Babylonia and Assyria had been joined in a kind of personal union, and as we have seen, Babylonia had constantly revolted, and as constantly been defeated. After Sennacherib's punishment of Babylon, Esarhaddon had entered upon a new policy of conciliation, and the result was that his two sons divided Assyria and Babylonia among them, the ruler of Nineveh, however, being paramount lord of the empire. It was to prove a dangerous political idea; the dynastic division of the twin states of Mesopotamia became fatal.

Already in 667 a great rising took place in Egypt which was only suppressed after long fighting. The Lydian king Gyges as well as the sorry remains of the Urarju state asked for help from the great king against the Cimmerians. Successful expeditions against Elam curbed that state. But in the year 651 revolt flared up in the whole of the empire, Shamash-shum-ukin became the leader of a coalition in which Elam, Egypt, and the Lydian Gyges were the dominant members. Ashurbanipal realised that the leader must be defeated first and turned his entire host against Babylon, which fell in 648; after this,

¹ VA 2708: Esarhaddon Senjirli St., Rev. 38-51 (VS I (1907), No. 78).

some time between 647 and 645, he started on a campaign against Elam, which he destroyed completely and forever. With the annihilation of Elam as a great power, and the final victory over Babylonia which was now again united with Assyria in a personal union, Ashurbanipal, assuming the name of Kandalanu as lord of Babylonia (647-626), the great Assyrian king, was now ruler of the whole world, as then known.

Soon afterwards, however, Egypt was lost. The distances were too great, even the famous forced marches of the Assyrian army were no use, and in addition Egypt was a country with a large hostile population. Our sources are silent concerning the last 11 years of Ashurbanipal's reign, but it would seem that these years were occupied in building operations, more especially the restoration of temples in Babylon, Borsippa, and Nineveh. But in addition the king devoted some time to making and procuring copies of texts for his royal library which comprised all branches of Assyro-Babylonian culture; notably religion and historical events are abundantly represented. In Ashurbanipal's own words "row upon row of all existing characters I wrote (i.e. caused to be written) on tablets, imprinted and perused (them), whereafter I placed them in my palace so that I can peruse them and read them aloud."¹ Ashurbanipal's Library, which was discovered in 1849-53 during the English excavations at Nineveh by A. H. Layard and H. Rassam, respectively in the south-western palace built by Sennacherib and the northern palace of Ashurbanipal, are still, in spite of innumerable later finds of texts, a main pillar of our insight into the history, culture, and religion of the Mesopotamian peoples. While his military triumphs and the vast extent of his empire have long been forgotten, his name will forever be preserved in the records of civilisation as the first great collector and preserver of texts from bygone days describing the history and culture of his own people.

§ 14. Thirteen years after the death of Ashurbanipal the Assyrian empire no longer existed under the leadership of the Assyrian king. The empire itself still survived in so far as the large southern territory from the Zagros Mountains to the Nile valley merely changed its rulers. First it was the Neo-Babylonian, later the Persian kings who

¹ M. Streck, *VAB* VII 2 (1916), pp. 354 f., cf. also Chapter XIV § 2.

held sway, and the actual overthrow of the old Assyrian empire which the Persians inherited was the work of Alexander the Great (356-323).

The last events are briefly told. In 625 Babylonia had regained its independence under Nabopolassar who called himself a man of "low rank, of no birth" (*i-na mi-iš-ḫi-ru-ti-ja apal la ma-am-ma-nim*¹). But more danger came from the enemy in the east; Elam had been crushed by Ashurbanipal but this at the same time improved the strategic position of the Indo-European Medes and Persians in western Iran, and upwards of a hundred years after the fall of Elam the latter were to subjugate the whole of the world then known. In 616 we find Nabopolassar on Assyrian territory with his army, and in 614 he meets Cyaxares of Media after the latter had captured the city of Assur. Nineveh fell in August 612 after bloody fighting against the allied armies had been going on from the month of June, and the metropolis was reduced to a mere heap of ruins. An Assyrian general, Ashur-uballiṣ fled to Harran, calling himself king of Assyria and trying to assert his right to the throne by the aid of Egypt. In 605 Nebuchadnezzar, the Babylonian heir to the throne, won a complete victory in the battle of Carchemish over the last remnant of the Assyrian army and the Egyptians.

The empire was divided, the Medes keeping Assyria and northern Mesopotamia (with Harran), whereas Nebuchadnezzar II (604-562) in addition to his hereditary kingdom Babylonia, occupied all Syria and Palestine. Measured by Babylonian standards it can justly be said that Babylonia had never before controlled so vast an area, but the Neo-Babylonian kingdom was a heritage robbed from the Assyrians; not acquired by the purposeful work of centuries, it was soon doomed to fall. The long reign of Nebuchadnezzar II was peaceful, the abundant textual evidence from his time tells of his vast building operations, inter alia in the capital Babylon, and likewise of prosperity and order in Babylonia. The southern realm, which ever since Hammurabi's days had been overshadowed by Assyria, and finally had been harassed by Assyrian campaigns, occupation, and violent insurrections for more than a hundred years (729-626), now experienced a brief revival. Much of our knowledge of Babylonian architecture is derived from the extensive building activities of this period.

¹ BE 14940, see F. H. Weissbach, *Babylonische Miscellen* (1903), Pl. 8 (WVDOG IV).

but further a voluminous material of documents and contracts of a private character from this time has given us important knowledge of nearly all aspects of Babylonian culture.

The period from the death of Nebuchadnezzar 562 to 555 is marked by rapidly changing rulers, and intrigues and disagreement within the royal family. But in the last-mentioned year Nabonidus, the Aramaean from Harran, (555-538), acceded to the throne of Babylonia. This peculiar ruler may be called the archaeologist on the throne, his peaceful reign became the scene of an extensive restoring and rebuilding of old temples, which is unequalled in the history of Babylonia. Nabonidus always remained an Aramaean. He felt closely attached to the deity Sin, who had from the old days had a magnificent temple in his native town of Harran, so that Marduk in Babylon was neglected for the benefit of Sin. The priesthood were therefore opposed to him, especially when he failed to celebrate the *akitu* festival, the Babylonian New Year's feast in honour of Marduk, and this also turned the mind of the people against him. It may have been as a result of the animosity of the population that he retired to the oasis of Taima in the Arabian desert, while his son Bêl-shar-uşur (Belshazzar) ruled Babylonia.

§ 15. The new great power in western Iran, the Persians, took control in the east under the leadership of Cyrus, the king of Anzan (Anshan), drove Astyages of Media from the throne, and subdued the Median possessions, Assyria and northern Mesopotamia with Harran. Nabonidus regarded it as the wise direction of Heaven that he was now able to rebuild the Sin temple in Harran which the Persians had freed from the bondage of the Medes. But Nabonidus had little insight into foreign politics. Cyrus marched onward to the west and conquered the great Lydian state whose king, Cræsus, was killed, and now Cyrus held Babylonia as in a strategic vice. In September 538 he defeated the Babylonian army at Opis on the western bank of the Tigris. Sippar surrendered without resistance in the first days of November, and two days later the capital Babylon fell into the hands of Cyrus without a struggle.

In Cyrus' cylinder inscription from Babylon it is related how Marduk, the god of Babylon, whom Nabonidus had neglected in favour of Sin, marched with Cyrus and his army against Babylon "as a friend and

companion".¹ It was Marduk who allowed Cyrus to "reach the interior of his city of Babylon without fight or battle, he (Marduk or Cyrus?) saved Babylon from its distress".² Nabonidus surrendered without fear to Cyrus and "all Babylonians, all Sumerians and Akkadians (i. e. the inhabitants of southern and northern Babylonia) sovereigns and governors of cities prostrated themselves before him and kissed his feet. They rejoiced in his royal dignity, their faces brightened (with joy)".³ Cyrus was greeted as a deliverer, and the next year he sent his son Cambyses to Babylon to represent him at the great New Year's feast in honour of Marduk, which Cyrus, like a true Babylonian, gave the place of honour among the cult festivals of the country. The ruler of Babylonia might be a Babylonian, an Assyrian, an Aramaean, or a Persian, but the god Marduk was the paramount lord of the country.

¹ Cyl. Inscr. 15 (V R 35).

² *Ibid.* 17.

³ *Ibid.* 18.

CHAPTER XII

THE TOWN AND DAILY LIFE

§ 1. The prerequisite of the policy of conquest pursued by the Babylonian and notably by the Assyrian kings was not only the organisation and equipment of the military forces but also the thriving of agriculture: "Ploughs I caused to be made in all my country. The piles of corn I allowed to grow far more than those of the old days, I stored them. Throughout my country I provided draught-horses", says Adad-nirāri II of Assyria (911-891)¹. Apart from the inmates of the royal palace and the leaders and subordinate assistants in the civil and military services, the Babylonians as a whole were a peasant population, whose days were spent in the hard work of sowing the seed in the fields, the daily tending and final reaping of the crops, and in connection with this the diligent digging of canals and constant irrigation. The bright spots in this monotonous life which made heavy demands on the working capacity of the individual in the constant struggle with the waters, whether they were present in too large or too small quantities (cp. Chapter I), were the home life with wife, perhaps concubines, slave women, and children, and frequent visits to beer houses, bars, and the local brothels.

The earliest Mesopotamian dwelling was a hut built of reeds and rushes later rendered watertight with clay as described in Chapter VII § 9 from the evidence derived from deep excavations in Tell Al 'Ubaid. Here, as in Uruk and Ur, the earliest reed huts were rectangular, but in northern Arpachiyah near the later Nineveh circular houses have been found, some 6,7 m in diameter, often communicating with rectangular narrow rooms which perhaps served as passages. The circular rooms were probably covered by simple vaults so that the dwelling-houses in Arpachiyah had the shape of beehives, as in the Egyptian Amratian culture period.

¹ Cf. above pp. 621-22.

Whether the Mesopotamians in the Ubaid Period (cp. Chapter VII § 9) gave up the reed hut as their house type and lived in brick houses is difficult to say; in the Warka culture the latter are a reality. The oldest finds in the northern part are those from Gawra VIII, the houses of which are built of baked rectangular clay bricks, but we must remember that the climate in northern Assyria was damp and thus required burnt bricks, and further that the rainfall in the country provided its inhabitants with wood to feed the fires of the furnaces. In southern Babylonia, on the other hand, with its dry air, the sun-dried clay bricks (*libnāti*) were the earliest building material.

Limestone as well as the more expensive kinds of stone were in later times only employed for the decoration of palaces and temples, whereas clay was used for all private houses in the south as well as the north of Mesopotamia, and for the foundations of the palaces and the core of the great temple towers. The clay was pressed in tile forms (*nalbanāti*) and then dried in the sun; baked clay bricks (only sing.: *agurru*), on the other hand, were employed where the solidity and endurance of the building was the chief consideration and when there were independent means to draw upon. The sun-dried clay bricks were but slightly resistant to the dampness of the rainy season and the violent thunder showers which transformed them into a soft mass of clay, so that the houses collapsed.

Plano-convex building bricks have been used for a short period in Early Dynastic times, their size was 20 × 30 cm. Later on quadratic forms were mostly employed, 31–34 cm square, and 8–10 cm thick; the Assyrian building brick was somewhat larger (37–38 cm square, the thickness varying from 10 to 15 cm). In the building of houses warm bitumen (*kupru*) was originally used to cement the bricks together, later on gypsum was employed as mortar (*gašsu*). A system of vertical drainpipes provided an outlet for showers and helped to air-dry the walls wetted by the rain. The walls of private houses were thin, 1–2 tiles deep, provided with stucco, and hung with woven carpets, originally plaited rush mats; later they were decorated with durable enamelled (glazed) tiles; the floors were of stamped earth, only in palaces were there clay or stone floors. The outer wall faces might be enlivened by patterns composed of round disks, or by a saw-toothed front.

We gain some idea of the interior of a Babylonian private house from the "Arch House" of Early Dynastic times (see Chapter VII § 11)

in Tell Asmar and the "Great House" in the Merkes quarter in Nebuchadnezzar's Babylon (604-562). Both these are larger buildings. The groundplan of an ordinary private house (from Fara, the ancient Shuruppak) shows us an undecorated front without windows and a narrow entrance door opening onto the street; everything reminds one of the original defensive character of the house in the troubled war times of the past. Through a small ante-room which originally served as a rampart to the house, we pass into an open court which is approximately square and unroofed, the ground being therefore covered with débris or pebbles. For climatic reasons the largest living room is always laid south of the open court; in the hot season this shelters the interior of the room from direct irradiation by the sun. If next we mention a bituminised bath, a lavatory (*bît musâti*) with a stone floor, a bedroom and a room where the bread was baked we have probably completed the tale of the rooms contained in a small private house. The larger private houses had several courts and more spacious living rooms, in addition to a number of passages, rooms for the house watchman, the servants, perhaps for business purposes, or large store rooms for food, private rooms and bedrooms. In Tell Asmar's "Arch House" the large living room is furnished with a fixed clay bench running along the wall, and a fireplace. The doors of this house are arched and lack the support of wooden door frames, they are only about 1.57 m high so that a person entering the house had to stoop as he went in. A window was further found which let air in to a store room. This was the first time during the excavations in Mesopotamia that windows could be fitted into the architectural picture,¹ and the discovery of terracotta "grilles" in Tell Asmar (Season 1932-33) testifies to the presence of windows in other houses too. On the other hand, I think it safe to assume that the houses had no windows fronting the street or looking towards the outside, they served other purposes which we cannot always make out; only the above-mentioned narrow entrance and drainpipes opened on to the outside.

Whether the ancient Mesopotamian houses had metope-like inter-spaces instead of windows high up between the roof and walls as in Kurdistan houses in our time can hardly be ascertained. The roof was flat and in the hot summer season it probably served as a gathering

¹ Later excavations have testified to windows in temples from older periods than Tell Asmar's "Arch House", e. g. Eridu I-V and Gawra VIII.

place for the family after sunset. It was built on treetrunks laid across the walls, made tight with rush mats and packed and firmed clay; Strabo XV, 3,10 tells us that the Babylonians covered their roofs with a layer of earth two cubits deep as a protection against the incredible summer heat and adds that owing to this great weight they were forced to build long but narrow living rooms in the houses, a statement which has been confirmed by the excavations in Mesopotamia. From Sennacherib's palace reliefs in Nineveh we know buildings with domed roofs but these must have served other purposes than habitation (store-rooms, warehouses, etc.). Ladders or a fixed staircase led to the roof, probably from the anteroom. The arch was used in architecture even in the earlier times, the rooms were roofed with harrel vaults, and may have served draining purposes; real vault constructions do not appear until the time of Nebuchadnezzar as a substructure to the famous "hanging gardens" of his palace. Baked clay lamps with oil of sesame as the light-giving medium served to light the houses after sunset.

One-storeyed houses were the general rule and this also applies to the palaces. If thus the 16 metres constituting the artificial terrace of the palace of Dûr-Sharrukin are removed there are only 10 metres left for the height of the actual building. Herodotus I 180, however, speaks of Babylon as a city "full of houses *τριποδῶν καὶ τετροπόων*", which George Rawlinson¹ translates as "three and four stories high," but O. E. Ravn² has rightly seen that the correct translation should be houses "with three or four roofs". Extensive blocks of houses in the capital containing various courts and numerous rooms of course presented a gay spectacle with their several roofs facing in different directions; and it is possible that regular roof flats with small rooms serving different purposes were the rule in large houses. On the other hand, it would be a mistake to include here the socles for cult objects found in the G Stratum of Assur on the view that they are models for houses.

Before we record what we know about the size of the houses it may be mentioned that the famous excavator of Ur, Sir Leonard Woolley, in this excavation site found a number of middle class houses from the Larsa Period (2026-1762). These contain 13-14 rooms surrounding a paved court, the lower part of the walls being of baked bricks replaced higher up by sun-dried tiles. The change in the material was hidden

¹ *The History of Herodotus* I (1858. New ed. 1912), p. 91.

² *Herodotus' Description of Babylon* (1942), p. 79.

by white plaster. Of windows there were none. The narrow anterooms had drainpipes from sinks, in the middle court a brick staircase led to the roof. Behind the staircase there were lavatories with drainpipes of terracotta. Further, there was a kitchen with a fireplace and mill-stones, a large living room with two doors, rooms for servants; the rooms were about 3 metres high. Altogether Woolley's finds agree closely with the general impression we gain of the Babylonian private houses pieced together from other evidence. However, from the inside staircase which takes up much room Woolley inferred that there was a kind of first floor, and that an inside wooden gallery running all the way round gave access to the rooms of that storey. Though I know that Woolley bases his inference on more than the existence of the staircase, nevertheless I must maintain that the two-storeyed private house in Babylonia is as yet a daring hypothesis.

Below I give some values for the external dimensions of various private houses in Mesopotamia, accompanied by a statement of the number of rooms:

Tell Asmar (Early Dynastic Period)	15 × 13 m.	11 rooms.
Khafājah	29 × 25 m.	12 rooms, court 11 × 9 m.
Tell Asmar (Sargonic Age)	23 × 15 m.	12 rooms.
Assur (Age of Hammurabi)	33 × 24 m.	10 rooms.
Ur "	13 × 11 m.	7 rooms, court 6 × 5 m.
Assur (c. 1200)	29 × 24 m.	10 rooms.

From the Babylonian residential quarter Merkes in the capital itself in the time of Nebuchadnezzar (c. 550) we may mention:

"The Great House" (No. 3)	40 × 40 m.	26 rooms, largest living room 16 × 7 m.
House No. 1	23 × 30 m.	18 rooms, court 9 × 10 m., largest room 13 × 5 m.
House No. 12	13 × 18 m.	9 rooms, court 6 × 6 m., largest room 9 × 3 m.

It is difficult for us, the later-born to draw any safe conclusions from this material. We know that the lord of Eshnunna, the present Tell Asmar, lived in a palace with 36 rooms and several courts, and that

its external dimensions were 77×28 m, and that most of the above-mentioned houses were the property of well-to-do people. Perhaps in the Ur house from Hammurabi's Age and the Merkes house No. 12 from the last days of Babylon we have a general indication of the character of the private houses of plain city people. But of the houses of the country population we have no knowledge whatever.

The streets (*sūkātī*) through which the inmates of the houses could communicate with each other and which led to the principal squares and buildings of the city were narrow (3–4 or 4–6 m) and without any pavement; their course was quite irregular as can be seen in Assur where we can trace the plan or street net-work round the "Red House". There are no clear lines in it, and it must have caused great difficulties to a stranger. The street net-work in the Merkes quarter of Babylon also is irregular. The straight roads mentioned by Herodotus I 180 are probably the special, wide streets laid out by royal builders, such as the Babylonian procession street, Aiburshabu,¹ through the Ishtar gate, or the up to 35 m wide Marduk or Nergal street, which ran through Babylon from the east to the temple tower Etemenanki's entrance gate. In Nineveh Sennacherib laid out the "Royal Road" which ended in front of the gate into his palace park; it was 39 m wide and the king caused stelas to be erected along both sides of it so as to prevent any curtailment of the width in the future. But if anyone built his house in such a way that its foundations overlapped the "Royal Road", the owner was to be impaled on a stake raised on his own house. We must imagine this street to have been straight as an arrow like the two above-mentioned streets in Babylon, but that this was not the rule is shown by the excavations, and in addition Sennacherib, in the same building inscription mentioning the "Royal Road", tells us that he made the streets of Nineveh wide enough for his royal carriage to pass through them, that is to say, he made the "Royal Road" by pulling down narrow and irregular streets. "I made it (i. e. the "Royal Road") shine like the day",² says Sennacherib further. This is not merely a poetic figure of speech, but is based on the fact that the new street did not resemble the other streets of the

¹ E. g. *a-a-ti-bu-ur₂-ka₂-bu-um*: I R 52 No. 4, Obv. 22; this Nebuchadnezzar inscription was first published by C. J. Rich, *Second Memoir on Babylon* . . . (1818), No. 4; see p. 80.

² Sennacherib Inscription on two Stelas, 16 (B. Meissner und P. Rost, *Die Baulinschriften Sancheribs* (1893), pp. 68 f.).

city. For these were garbage dumps for the inhabitants, hence the level of the street was constantly rising so that stairs or steps going down were required to reach the floor of the building from the street.

§ 2. The city of Babylon, almost unknown when in 1894 B.C. the Semitic Amorites formed a state in the upper part of South Babylonia, became the king's residence, and in the great period of the Babylonian kingdom under Hammurabi (1792-1750) the ground plan was probably laid out which the great excavations have later revealed to us. The principal blocks of buildings such as the royal palace, the temple of the city god Marduk, ever since then had their fixed places, and strong walls protected the city from violent onslaughts at a time when Hammurabi had enemies in the south and the north. The net-work of streets which is partly known to us from the excavations in our century no doubt also dates from Hammurabi's time. But it is just as certain that changes were made in the various quarters of the town since the days of the First Babylonian Dynasty; new monumental buildings, for instance temples, were erected while the continual wars left their traces on the face of the city. The year 689 was the year of destiny for the great metropolis, when Sennacherib, as already mentioned, thought he could solve the Babylonian problem from an Assyrian point of view by wiping the city off the face of the earth. However thoroughly the Assyrians set to work to destroy monumental buildings and private houses, the ground plan and the street system still remained intact so that it was possible to rebuild the capital when a reversal of the Assyrian foreign policy set in under Esarhaddon. And during the brief but brilliant period of the so-called Neo-Babylonian kingdom (625-538), in which Nebuchadnezzar's name is dominant, the city rose again in an architectural beauty the fame of which re-echoed throughout the then known world.

Sennacherib's thorough-going destruction of Babylon had the result, however, that the capital we now know through the excavations of the Deutsche Orient-Gesellschaft under the leadership of Robert Koldewey in the years 1899-1917, is in the main Nebuchadnezzar's town. Textual evidence from Hammurabi to Nebuchadnezzar enables us to gain some idea of the topography of the city which may supplement the results of the archaeological excavations and which are extremely important, seeing that so large a site as that of the Babylonian metro-

polis can only be partially excavated; the principal blocks of buildings must be the first objective of the archaeologist.

In the earliest times Babylon was situated on the eastern bank of the Euphrates, but the growth of the population through its life-time of more than 1300 years made expansion necessary and led to the building of the "New City" (*ālu eššu*) on the western bank. Henceforth the town appears as an almost regular square, 8150 m in circumference, the whole of its area being protected by a double city wall. This construction was of large dimensions and gave Babylon the character of a regular fortress. The inner double city wall, *Imgur-Enlil*, ("The god) Enlil has been gracious", was about $6\frac{1}{2}$ m broad and was divided by an intermediate space of about 7.2 m, which probably served for mustering the troops and changing the guard, from the outer city wall *Nimitti-Enlil*, "Enlil's support(?)", which was 3.7 m broad. Thus the whole of the defence construction, which was provided with towers at a distance of about 60 m from each other, had a total breadth of about $17\frac{1}{2}$ m. Of the height of houses and towers we have no knowledge for very good reasons, but military and architectural considerations lead us to estimate the height at between 12 and 18 m. For the construction of this magnificent fortification (length 8150 m, breadth $17\frac{1}{2}$ m, and with 135 towers) sun-dried bricks were used, since baked bricks would have entailed tremendous expense, but this in some degree diminished the solidity of the wall, and indeed the texts tell us of constant repairs. As a further measure of defence a moat was laid outside the outer double wall; the width of this moat was in places at the east and south walls between 70 and 80 m, but the average width was about 25 m. There can hardly be any doubt that in its main features and construction the double wall, though in another shape, dates back to the First Babylonian Dynasty, since textual evidence mentions kings like *Sumu-abum*, *Sumula-ilum* and *Apil-Sin*'s erection and repairing of "Babylon's great wall".

The weak point in the fortification system of Babylon was that the Euphrates flowed past, later after the building of the "New City", right through the capital. *Nebuchadnezzar* tried to remedy this in two ways. Partly he threw out advanced forts in the northern part of the town around and outside the *Ishtar* gate, so that the royal palace and the main thoroughfare running north-south, the procession street *Aibur-shabu*, were further covered. But moreover, in the Euphrates west of

the palace, he built a huge fort (*haṣu rabītu*) lying like a barrier to prevent invasion from the river; the defences of the "northern palace" formed the extreme northern outpost of this fortification. On the other hand, Nebuchadnezzar left the Euphrates quay of the "Old City" unfortified, perhaps he relied on the vast defences in the north, perhaps he was more apprehensive of attacks from the east where West Iranian peoples such as the Medes and Persians had succeeded the Elamites whom Ashurbanipal had crushed once upon a time in the years 647–45.

At any rate, it is certain that Nebuchadnezzar erected an outer double wall around Babylon and its surrounding suburbs. This huge construction which is estimated to have been 12–18 km. long, is only partially known from the excavations, and more especially the part of it which was situated to the east in the direction north-south. From this we see that the depth of the construction was about 27 m, the outer wall about 8 m, the intermediate space 12 m, and the inner wall 7 m. The fortification was provided with towers at a distance of 40–50 m from each other, the outer wall was built of baked clay bricks (*agurru*) in contrast with the old inner double wall, and had a moat in front of it, the breadth of which was in some places about 100 m. Surrounding Nebuchadnezzar's summer palace on the present mound Bâbil, this enormous fortification extended northwards to the eastern bank of the Euphrates, and thus also formed a protection for *bīt akītu*, one of the central shrines of the city, where essential parts of the rites of the New Year's festival were performed, and which had previously stood unprotected outside the defence line of the inner double wall. In the direction north-south far towards the east Nebuchadnezzar's new outer wall continued southwards, cutting the present road from Baghdad to Hillah, and then turning at right angles in the direction east-west to end at the eastern bank of the Euphrates, and at last in its east-west course running parallel to the old inner double wall. Perhaps it was as a kind of continuation that Nabonidus, the last ruler of Babylonia, built a quay wall along the bank of the Euphrates in the "Old City" and thus completed the city's defence line. At any rate, Nabonidus' wall had the same width as the external wall in Nebuchadnezzar's outer double wall and was provided with towers.

Nebuchadnezzar's and Nabonidus' vast defences were never put to any military test. "On the 16 [Tashritu] the governor of Gutium, Ug-

bara, and Cyrus' troops marched into Babylon without fighting. After this Nabonidus, when he returned, was taken prisoner in Babylon."¹ says the so-called "Nabonidus Chronicle" under the year 538 B.C.

The traffic of the capital to the outside world was regulated partly by the sailings on the Euphrates, partly by the roads issuing at the 9 city gates in the inner double wall. In order to reduce the pressure of the river water as it flowed past the city a canal running west-east, the Libil-hegalla canal, had purposely been dug just south of the palace; it was also called the East canal or the Bânîtum canal, after Šarpanî-tum (Zêr-Bânîtum) the consort of the city god Marduk. The canal ended in the moat east of the city, and its water returned to the Euphrates through the moat south of the city. Perhaps the Euphrates was called the Arahtu canal in its course between the "New City" and the "Old City"; these two quarters of the town were connected by the capital's only fixed bridge, about opposite the middle of the temple precincts of the city god. Of the 6 city gates in the "Old City" we shall only mention the Marduk gate situated to the east at the end of Marduk (or Nergal) street, the longest and widest street of the capital, leading westward through the holy gate to the site of the city god's temple tower. The Ishtar gate forms the termination of the sacred "procession street", Aiburshabu, to the north; a magnificent construction in itself, it was fitted in to the fortifications forming the northern front of the royal palace. Nine wide main streets, straight as arrows, led to the nine city gates; these were the main thoroughfares of the city, two of which have been mentioned above. Outside the city area proper and within Nebuchadnezzar's outer double wall we know the names of two military roads and 24 streets.

Of the various quarters of the metropolis we know several by name, it is more difficult to identify their situation with certainty. The surviving names have often a poetical form, such as "the dwelling of plenty", "the dwelling of life", "city where the bricks are ancient", etc. Of these we can identify "the dwelling of life" with the site of the city god's temple, and "the hand (or power) of heaven" (*Šu-an-na*) with the southwestern part of the "Old City", where amongst other buildings the Ninurta and Gula temples were situated. Between the royal palace and Marduk's extensive grounds, stood the "Middle City" (*libbi āli*) west of the "procession street"; east of this "God's gate" (*Sum. Ka-dingirra*, Ass.-Bab.

¹ BM 35382, III 15-16 (Sidney Smith, *Babylonian Historical Texts* (1924), Pl. XIII).

Báb-ilu, plur. *Báb-ilāni*, "the gate of the gods"), which quarter gave its name to the whole of the city. The gate to which the name refers is the sacred gate to Marduk's temple tower, Etemenanki, on to which the above-mentioned Marduk (or Nergal) street opens out. In the God's gate quarter stood a renowned Ishtar temple and another temple dedicated to Ninmah, and here was the residential quarter which the German excavators named Merkes, "central point", after the Arab name *markaz* for this part of the vast Babylonian area of ruins. Quarters such as Kullab, Te-e, and Kaširi must have been situated in the north-eastern part of the "Old City", Shushan in the south-eastern part, Kumari somewhere in the northern part of the "New City". Finally we may mention that the burial place of the Babylonian kings (Akk. *bīt mūti*, "house of the dead") was in the latter city, near the Adad gate or in the south-western part of the quarter. The rest of the inmates of Babylon, on the other hand, were buried in a very extensive territory outside the inner double wall near the south-western area of the "New City" south of the continuation of the Adad street outside the town.

From topographical and historical texts we know that each of the many quarters of Babylon had several temples: in all the city had 43 temples to more important gods and 55 chapels to Marduk, some of which we have already mentioned. It will be in place to describe Marduk's Esagila temple and Etemenanki, as well as the Ishtar gate and the procession street Aiburshabu in more detail in connection with next chapter's account of the religious life of the Babylonians, while here, to round off the picture of the city, we shall describe the palace which, ultimately, is only an enlarged reproduction of the houses of private citizens.

Nehuchadnezzar's newly built summer palace outside the boundaries of the city has been mentioned above. In the "Old City" his residence was probably situated approximately in the same place as that of earlier Babylonian kings. In Sennacherib's ravages in 689 as well as on Ashurbanipal's punitive expedition against his revolting brother Shamash-shum-ukin in 648 the royal palace was of course the first object of incendiarism and destruction, and not until the time of Nabopolassar (625-605), who founded the Neo-Babylonian kingdom and helped to overthrow the Assyrian power, was a royal palace again erected in Babylon. Since this, however, was built solely of

sun-dried bricks and its foundations were not above the high water mark of the river it was destroyed in one of the great inundations of the Euphrates.

It was natural that Nebuchadnezzar, in his long peaceful reign of 43 years which were mostly devoted to large-scale building operations, should also erect a residential palace that could be a fitting symbol of the territories which in addition to Babylonia comprised Syria and Palestine controlled by the great Babylonian king. In that part of the vast ruins of Babylon which the Arabs with a right instinct have always called *kaṣr*, "the palace", Nebuchadnezzar's great palace was excavated. If we put the entire area of the "Old City" at c. 2 1/2 sq.km, without being able to guess at the number of inhabitants of this area, the palace buildings occupy 520 × 420 m of this area.

In one of his numerous building inscriptions Nebuchadnezzar has the following statement about the erection of his palace: "Its (i.e. the palace of Nabopolassar) walls, bungling work of sun-dried bricks, I pulled down, and I uncovered his foundation stone and penetrated down to the ground water. Keeping in mind the water, I laid the foundation (of the new palace) firmly and built it up mountain-high with bitumen and baked bricks. Huge cedars I caused to be laid for its roof, door leaves of cedar mounted with copper, thresholds and hinges made of bronze I fitted in to its gates; silver, gold, precious stones, all that is costly and glorious, wealth and goods, ornaments of my exaltedness, I stored within it, an immense abundance of royal treasures I accumulated in it."¹

The palace buildings can be divided into three groups, the "northern palace", which was in the main a projecting fortification for the protection of the residential palace and the north-western front of the town, the "palace museum" (*bīl tabrāt nīši*), which contained monuments of all kinds, partly the spoil of war, and a library with clay tablets, and the "southern palace" which besides being Nebuchadnezzar's residence was also the centre of the military and civil administration. The "southern palace" was the most strongly fortified area of the city. To the north the "northern palace" and "the palace museum" formed strong advanced defence lines, and the northern front of the "southern palace" itself was sheltered by the

¹ BM 85- 4-30, 1, II 12-21 (VAB IV, p. 116).

inner double wall in its course from the Ishtar gate to the immense barrier fort, which again secured the palace area from attack on the Euphrates side.

In the "southern palace" we can distinguish between the western and eastern parts; the former is the smallest, and is the site which was occupied by Nabopolassar's palace. It is clear that Nebuchadnezzar extended this much towards the east, and both as regards size and decoration attached most importance to the eastern wing, which was extended right up to the Ishtar gate and Aiburshabu. The main entrance to this colossal palace must probably have been from the procession street, though the king undoubtedly had special exits, amongst other things on the northern front, probably between the palace wall and the inner double wall.

Through two large courts around which are grouped a multiplicity of rooms and smaller courts, which must partly have been the living quarters of palace functionaries and servants, and partly government offices, a person entering the palace reached the largest court, which is 60×55 m. South of this, exactly as in the most unpretentious private house lay the largest room, the throne room, of the palace, 52×17 m (Galerie des Glaces, Versailles is 73×10.40 m) into which three gateways led from the court. The front of the throne room was embellished by coloured enamelled (glazed) tiles covering the whole facade. On a dark blue ground were seen conventionalised palm stems with pale blue capitals and above this ran a connected row of white double palmetti accompanied by yellow-black-white square bands above and below. Behind the throne room, to the south of this again, there were smaller courts, and rooms grouped round these which were probably living rooms for the king, while the throne room was used for audiences and deliberations with the best and highest men of the realm and for the reception of delegations from foreign powers.

The north-easternmost corner of the "south palace" fronting the Ishtar gate, the northern front of which faces the inner double wall, was occupied by a building, architecturally standing apart within the palace construction, to which a broad passage from the middle court gave admission. It consisted of two rows of seven longish rooms facing a middle passage, all of them roofed with barrel vaults; in one of these rooms there were, side by side, two well shafts, the

water of which could presumably be raised by means of a paternoster mechanism. R. Koldewey¹ conjectured that this construction formed the substructure of the famous "hanging gardens" in the palace of the great Babylonian king, of which we have only information from the ancients (Berossus in Josephus, *Ant. Jud.* XI; Ctesias in Diodorus II 10; Strabo XVI, 1, 5; Quintus Curtius Rufus, *Hist. Alex.* V 1).

The palaces of the Assyrian kings were built on the same principle; the ground plans show us a large number of courts to the south of which the larger living rooms are placed. But of course the dimensions vary, in the Dûr-Sharrukîn palace which Sargon built, the largest court is 110 × 61 m, the official festival halls are 40 × 10 m. The Assyrian kings took great care that their palaces should have an impressive entrance gate, and were interested in the western style of architecture which they called *bît hillâni*; Tiglath Pileser III had such a building erected at Kalhu, and Sargon a *bît hillâni* beside the palace in Dûr-Sharrukîn. The building was provided with a portal borne by columns, which was unknown in Mesopotamia, and is familiar from Tell Halaf and Senjirli,² but its special Assyrian form has not yet been accounted for.

§ 3. Apart from the inmates of the palace and those who in superior or subordinate positions were attached to the civil and military administration in the state or municipal services, the majority of the inhabitants of Mesopotamia were farmers, the rest being occupied with commerce or trade. The farmer's working year was determined by the climatic conditions of the place. After a long rainless period, rain falls again in the 7th month (Tashritu = October-November), and in the next month, Arahšamna, the farmer can once more start his work on the land, the preparation of the fields and the sowing of the seed. Then winter sets in, which may be white and frosty especially in northern Assyria, but already in February it has lost its power, herds and flocks feed on the growing green and, in our day in the middle of May, in the period of the First Babylonian Dynasty at the

¹ *Das wieder erstehende Babylon ...* (1913), pp. 90-100.

² As to a building construction from Tell 'Atshânah (Alalah) Lev. XII (c. 2700-2350) Woolley, *A Forgotten Kingdom* (1953), p. 58 says: "we may perhaps see in it the prototype of the "Hittite" *Hilani*."

end of April, harvesting may begin. In the north the corn takes longer to ripen; in Babylonia the harvest may be completed at the beginning of Aiaru (May-June), but in Assyria not until Du'ûzu (July). In the summer time when the temperature in the month of Abu (August) in our day may rise to 50° C. in the shade, all farm work stopped, all the vegetation was blasted by the broiling sun where irrigation did not reach it. But the dates ripened and in Ulûlu (September-October) when the first coolness was felt, they were harvested. And with the comforting rain of the month of Tashritu, a new year begins for the farmer.

As to the extent of the arable land in Mesopotamia we can of course only form conjectures, but while figures have previously been mentioned which will hardly accord with the facts, it is a reasonable presumption to equate the arable land in Babylonia to that of Egypt, estimating it at 30,000 sq.km. In northern Assyria this value must probably be halved. All land in Mesopotamia originally belonged to the city god, was temple property, or was owned by the city god's earthly representative, the patesi or petty king, and when the great states were formed all land therefore became the property of the crown or the temples. These facts are discussed in detail in Chapter IX, in which we also saw that the development in the Isin-Larsa Period allowed for private property, which shortly afterwards under Hammurabi was officially recognised in his Law Code.

It is necessary, in order to estimate the details in the following survey of agriculture, commerce, and trade, to have a kind of table of Babylonian weights and measures, even though we have already occasionally mentioned some of the units. Apart from the measures of length, the names as well as the fixed quantities date back to the Sumerians.

Measures of length. The unit was a "finger", *ubânu*, 20 or 30 of these make a cubit, *ammatu*; this designation was also applied in astronomical measurements ($= 2^{\circ}30'$?). As a unit of length it varies somewhat according to the local city areas. The Gudea cubit at Lagash equalled 0.495 m. the Nippur cubit, which was standardised in the earliest Babylonian kingdom and after that is also called the Babylonian cubit, was 0.518 m. The "large cubit", *ammatu rabîtu*, was 0.555 m, it is often called the "royal cubit". The greatest unit of length was *kanû*, "reed", which was 6 or 7 *ammatu* of 0.495 m each.

Measures of area. The unit was a "bed", Sum. *sar*, Akk. *musarû*, which was equal to c. 35,3 sq.m. 100 *sar* was a "field" *iku* (Akk. *ikû*) = 3528.5 sq.m. The largest unit was a *bur* (Akk. *bûru*) = 18 *iku* = 63,513 sq.m. Under the Kassite Dynasty (1740(1430)–1165) the area of the fields began to be calculated in relation to the seed sown (in the time before Hammurabi conditions were different) and this method of calculation was retained in the Neo-Babylonian period; it will be discussed finally in our tabular view.

Measures of capacity. The unit Sum. *ka*, Akk. *sila*, was equal to c. 0.4 litres. 300 *sila* = one *gur* (Akk. *kur(ru)*) = 121 l. But in the Neo-Babylonian period one *gur* was put at only 180 *sila* or 72.7 litres, which agrees with a serious rise in the price of any commodity measured in *kur*. The causes of the rise in prices are unknown to us. A special measure of capacity was the Assyrian *imêru*, which probably denotes the maximum load of an ass, and which is equal to 100 *sila* = 40.4 l.

Measures of weight. Corn was the original measure both of weight and value, but on the later more frequent occurrence of metals, corn was replaced by these. The unit, characteristically enough, was called in Sumerian *še* (Akk. *šêu*), "corn", and was equal to $46 \frac{3}{4}$ mgr. 1 *gin* (Akk. *šiklu*) = 180 *še* = 8.4 gr.; 1 *mana* (Akk. *manû*) = 60 *gin* = 0.5 kg.; 1 *gun* (Akk. *biltu*) = 60 *mana* = 30.3 kg. Where metal (silver) weights take the place of corn weight as a measure of value the main rule for reduction is that 1 *kurru* of corn = 1 *šiklu* of silver.

Kassite measures of area. The unit was as follows: 1 *iku* calculated from the "large cubit" (= 0.555 m.) was estimated to take 30 *sila* = 12 l. of seed. The basic measure therefore is (1 *iku* =) 14,400 Bab. sq.cubits (= 4465.6 sq.m.) = 30 *sila*.

Neo-Babylonian measures of area. 1 *kurru* = 180 *sila* was used as seed for 54,000 Bab. sq.cubits = 13,231 sq.m., hence this calculation forms the basis of the measures of area. Inhabited allotments of land were measured by the Babylonian sq.cubit = 0.245 sq.m., one Babylonian *kanû* = 12 sq.m.

Our knowledge of the area of land owned by single individuals before Hammurabi's time is incomplete for very good reasons; we know, however, that Manishtusu's large purchases of land which procured the wages for his standing body-guard and strengthened his royal power, comprised 821 *iku* or about 3 million sq.m. of land,

and that estates might cover an area of 42 or 216 *iku*. After Hammurabi's time large estates comprised about one *bûru* or 18 *ikû*, while smaller lots of land ranged between 5–8 *ikû*.

Most farmers did not own their land but had rented it from its owner who lived in a town or the capital and supplemented his rent-roll by commercial activities; in Chapter X we discussed the rules of Hammurabi's Code concerning leases and tenant farmers. The peasant as a rule had his land on lease for one year; in return he was either, according to a contract, to pay a fixed due, as a rule in kind, or to give the owner $\frac{1}{2}$ of his harvest. If his lot was virgin soil the lease was valid for three years; the first year he paid nothing, in the second year the peasant paid the owner a low rent, and not until the third year had he to pay the full rent according to the wording of the contract.

The farmer's struggle against the pressure of the waters from the rivers in the spring time, and his toilsome work in the great summer heat with constant irrigation, his laborious digging of canals and constant watchfulness in attending to, improving, and repairing the dams, all this we have tried to describe in Chapter I. His implements were simple: a wooden plough (*epinnu*), provided with a yoke (*nîru*) so that it could be drawn by two or three oxen, a hoe (*marru*) with which the land was belaboured, amongst other things all clods of earth had to be broken up before the seed was sown, and finally the sickle (*gamlu*) for reaping the corn. Oxen drew the plough and were used in general as draught animals, while asses and mules, together with the farmer and his family, carried the seed and the crops.

When the yield of the harvest was to be calculated the cost of the seed might be deducted. We have seen that 30 *silâ* or 12 litres of seed were used for the sowing of one *ikû*, measured with the "large cubit" since Kassite times. From texts dating from various periods we see that the average yield of the harvest was 60 *kurru* or 60×121 litres for each allotment of land which measured 1 *bûru* = 18 *ikû* in area. Or by calculation we learn that 12 litres of seed yield a crop of 7260 litres of corn, or more than 33 fold. Even though this figure does not by far reach the fantastic figures of Strabo or Herodotus mentioned in Chapter I, it is nevertheless a remarkably high yield, the figures from our own country in our day being barely half that.

We must here disregard the deductions in the yield which ought

to be made in calculating the amount of corn used for the food which, amongst other things, keeps up the working power of the farmer and his family, since we have no knowledge at all of this, but we may deduct what is used for the food of the draught animals. Only a few texts give us information of this. Thus we may mention a Sumerian text from Lagash concerning field work on five lots of land belonging to the temple precincts of the goddess Baba. The dating is not quite conclusive, but the pre-Sargonic period (Urukagina) seems the most probable. From this we see partly that in the time before the Ur III Dynasty the seed for one lot of land of one *iku* is estimated at 12 *ka* (= Akk. 12 *silā*), not as in the Kassite time at 30 *silā*, partly that the food for the draught oxen before the plough at the ploughing of an area of 147 *iku* is put at 24 $\frac{1}{2}$ *gur*, or 2964.5 litres, or about 20 litres per *iku* for the food of the draught animals. It is seen that the corn used here is more than for sowing, which in the text is put at $0.4 \text{ l} \times 12 = 4.8$ litres, in Kassite times 12 litres per *iku*.

When the Mesopotamians spoke about "corn" (*šēu*) they always meant barley (*ašuanu*) the commonest and most frequently cultivated cereal, from which the daily bread was baked. Other kinds of cereals such as wild wheat (Sum. *gig*, Akk. *kibtu*), and especially a kind of millet, were known, but the most commonly grown after barley was the species of wheat called emmer (*Triticum sativum dicoccum*); it ripened later than the barley and was used for finer kinds of bread and in beer brewing. Besides barley and emmer legumes and sesame (*šamaššaniṃu*) were cultivated. As Herodotus I 193 has rightly remarked, the Babylonians did not know the olive tree. Perhaps Sennacherib tried to grow it and failing this used instead the oil pressed out of the sesame plant for food, anointment, light-giving medium, cult purposes, and medicine.

The peasant and the field (*eḫlu*), ploughing, sowing, and harvesting belong together. The gardener (*nukaribbu*) attends to the "garden" (*kirū*) where fruit trees, vegetables, and forage plants are grown and tended. Most of the gardeners rented their gardens; the payment to be made to the owner was higher than that of the peasant for his allotment. The chief garden produce was the fruit of the date palm (*gišimūaru*), the fruits of the fig tree (*tittu*), wine from the grape vine (Sum. *geštin*, Akk. *karānu*), and pomegranates, besides the autumn harvest from the other fruit trees; Sennacherib's introduction of the

cotton plant into the cultivated garden was mentioned in Chapter XI § 12.

In addition to the farmer and the gardener, the herdsmen (*re'û*) belong to the staff of the rural household, being officially appointed to tend the herds of the great estates. With large stocks there were of course many herdsmen under supervision. Private individuals who were not well off could club together to pay the herdsmen, the individual pieces of cattle being provided with the owner's mark. In contrast with the agriculturist and the horticulturist who had rented their land from the owner, the herdsmen received wages, though a moderate amount: to an average of 20 oxen (Sum. *gud*, Akk. *alpu*) corresponded a monthly wage of 50 *sila* = 20 litres. Side by side with the growing of corn, the breeding of cattle was one of the chief industries of Babylonia and included especially oxen, the daily ration of which, in addition to grass feed, was about 6 *sila* = 2.4 litres. Compare this with the monthly wages of the herdsman. Further, there were the flocks of small cattle (*šêni*): sheep (*iunmeru*) and goats (*enzu*); several breeds were known; and already in the earliest times a distinction was made between "meat sheep" and "wool sheep". The daily ration of the flocks besides the green stuff was 2 *sila* = 0.8 litres.

A highly valued draught animal was the ass (Sum. *anšu*, Akk. *imêru*), used before carts and in processions to the gods, as a pack animal or for riding, while the ox was better suited for work in the field, such as ploughing. The horse (*šîmû*) which did not become common in Babylonia until the time of the First Babylonian Dynasty and the Kassite Period, though known from the Isin Period, was not used as a draught animal in civil life. It was a saddle animal, but pulled the chariots in war time and was also used to draw the hunting carriages of the kings and distinguished persons. Being an expensive animal the horse was well provided with barley; its daily ration was 5 *sila* = 2 litres. The highest ration we know of, dates from Sumerian pre-Sargonic times, when the horse was still unknown, and was given to asses as the only draught animals. It was 225 *sila* a month or 3 litres a day. The use of the horse in the Middle East before c. 2000 is still a problem; bones have been found at Sialk and Anau, culture centres in the 4th millennium, and horsemen are seen depicted on finds in Susa (Elam) from c. 3000.

Of other draught and domestic animals used in farming the mule (*pará*) is mentioned in accounts as far back as the time of Naram-Sin and Shulgi (Ur III), which would seem to indicate that the horse was found earlier in Mesopotamia than stated above; the mule, however, may have been imported. In later times it was much used as a draught and pack animal. The camel (*gamalu*) was first introduced by Tiglathpileser I (1116–1078), while pigs (*šaḥú*) were known in Babylonia from the old days. They were kept in sties or ran freely about the streets where they acted as scavengers in company with dogs and vultures. Many breeds of dogs, geese, ducks, hens and pigeons will complete our survey of the farm animals. The food ration of a dog was 1–2 *сила* = 0.4–0.8 litres daily, that of a goose $\frac{1}{3}$ *сила*, while for a hen it was $\frac{1}{10}$ *сила*. The much coveted, oft-mentioned honey (*dišpu*) was not derived from apiculture, which was not known, but was a syrop made from dates.

The hunting expeditions of the royal ruler, on which lions and elephants were killed, have already been mentioned in Chapter 1. Pitfalls and javelins were the weapons of the hunter in the case of wild animals, in addition to various kinds of distended nets which were used for instance in catching gazelles. Bird-catchers (*arru*) seem also in the main to have employed nets. Fishing was an ancient industry carried on in the Persian Gulf, in the rivers or canals, by fishermen (*bá'iru*) who were then called respectively "sea-fishermen" (Sum. *šu-ḫa ab-ba-ge₂-ne*) or "freshwater fishermen" (Sum. *šu-ḫa a-dug₃-ge₂-ne*). As much as 18 different sorts of fishes are mentioned from a fish market in Larsa, to which must be added crawfish and turtles (Sum. *ba*). From the latter a kind of "fish oil" (Sum. *ia₂-ḫa*) was gained which was used for instance for cart grease. The fish were caught by the hands (cp. the Sumerian name for fisherman = hand + fish, *šu-ḫa*), on hooks of copper or with drag-nets. Men were only permitted to fish on their own property but fishing rights elsewhere could be rented. Ponds and streams abounding in fish were expensive to rent, we have an example from Nippur, where a year's rental of a fishing ground was fixed at $\frac{1}{2}$ *gun* or 30 *mana* = 15.15 kg of silver.

If finally we seek to learn something about the economy of farming, the relation of income to expenditure, the amount of profit, it must at once be emphasised that our material is too slender to allow us to get to the bottom of these questions. We may take a survey of

what we know, but we must admit that all that of which we have no knowledge prevents us from gaining any real insight. Thus we do not know the quality of the soil of the various lots of land, or the standard of valuation of the areas, we do not know the exact figure for paid help on the farms or whether the fields are of this or that size; we can see fairly well what is the purchasing power of corn or silver from a few examples, but we do not know the maximum or minimum requirement of food and other commodities for the consumer and his hired help. The daily expenses of the farmer and his household in order to support life in the style compatible with the size of his farm, his extra expenses for the purchasing of draught animals, farm animals, implements, boats, movables of every kind, repairs and perhaps business journeys, expenditure connected with weddings and births, death and burial, as well as the tariff in beer and wine houses, the amount of tips and gifts to the girls at the brothel—what all these expenses amounted to or how frequently they occurred we do not know. The general figure for Babylonia, that the crop yielded was 33 times the amount of the seed corn, shows us that agriculture was profitable in every respect; the size and magnificence of the temples and royal palaces, the great military apparatus and the numerous wars tell us that the state had very great resources at its disposal, which again means that the great land owners were able to pay their taxes. But of the life conditions of the peasantry we know nothing with certainty. The agriculturists constituted the majority of the country's population, and most frequently they only held their land as tenants.

The legal tender was "corn", natural produce of all kinds as well as metals, such as copper (as late as Assyrian times), lead (earlier Assyrian period), silver and gold. Silver was longest the dominant metal unit, it was weighed off in small pieces, plates, or rings; from the time of the First Babylonian Dynasty it was often provided with a stamp guaranteeing its weight and purity. In the Kassite period prices are often stated in gold, but this only denotes the currency, the payment was made in silver. The ratio of gold to silver was: 10 *še* of gold = 60 *še* of silver; of corn to silver: 1 *kur* of corn (121 l.) = 1 shekel of silver. The ratio of silver to copper under the First Babylonian Dynasty was 1 shekel of silver = 120–150 shekel of copper, but 1000 years later the ratio had changed; thus 1 shekel of silver = 150–180 of copper = 225 shekel of iron.

Among the tenant farmer's fixed expenses may be mentioned (1) the rent to the owner of the fields. This was either $\frac{1}{3}$ of the total harvest or was fixed by a special contract. Thus we may mention that at harvest time a tenant of a plot of land of 7 *ikû* was to pay the owner $\frac{2}{3}$ of a *kur* of corn per *ikû*, and on three festival days supply 20 *sila* (8 litres) of spirits, 5 *sila* of bread, and a piece of meat. (2) feed for the draught and domestic animals; the daily rations of the various animals have been mentioned above. (3) wages for the herdsman which were probably only paid by the large estates. (4) wages for hired labour. This interesting phenomenon is very difficult to clear up, we have a number of wage rates, but only in a few cases do we know the duration (in hours) of the work done per day or its nature. From a list of payments in which Barnamtarra, consort of Lugal-anda of Lagash, has entered the payment to her cooper, brewer, baker, and worker in precious metals etc. we see that they are paid 3 *mana*. But in the first place they are artisans, further they are artisans attached to the court, and finally we do not know how long a period of work (1 year? 1 month?) the payment of 180 shekel covers. We may at any rate say with certainty that the wages of the above-mentioned artisans tower mountain-high above those of the best paid field labourer. Concerning other similar high fees or wages to physicians, master builders, and boat-builders, see above pp. 561-62.

The wages of the day labourer, in so far as he was hired for a longer term, ranged between 60 and 180 *še*, the maximum being 1 *kur* of corn or 1 shekel of silver; the great deviations within the scale of payment must be due to the nature of the work, which we cannot compare with the single rates. The highest wage for long-term work is known from a contract according to which three reapers were paid in monthly wages to be equally shared between them 21 *mana* of sheeps' wool. Since 6 *mana* of wool, as we shall presently see, are ordinarily the equivalent of 1 shekel of silver, the total wage will then correspond to $3\frac{1}{2}$ shekel or 1 shekel and 30 *še* to each worker. Short-term work was paid by the day; if the wages were converted into monthly wages they would be much higher than those just mentioned. The daily wages must have varied between 10 and 17 *ka*, presumably according to the nature of the work, or from 6-10.2 *še*.

Among the more fluctuating expenses of the farmer we must reckon the possible purchase of draught animals; of domestic animals to

add to a stock depleted by sickness or injury; of wool and oil in so far as he did not keep sheep himself or grow sesame; to this must finally be added the regularly recurring expenses, unknown to us, which were mentioned in detail above. Below we shall give some prices, though it must be kept in mind that in the case of the farm animals there may also have been sales, so that the amount should be registered on the income side.

The price of oxen and asses, which presumably varied according to their age and quality was: for oxen 6–30 shekel, for asses $5\frac{1}{2}$ –20 shekel, sheep $1\frac{1}{2}$ –2 shekel, goats $\frac{1}{2}$ –1, pigs 1. Slaves and slave women were regarded as property (see Chapter X). Here too the prices vary a great deal, from 10–90 shekel for a slave, $7\frac{1}{2}$ –72 for a slave woman. A new millstone for grinding the corn cost $\frac{1}{4}$ shekel, new doors from 1–2 shekel. Finally we may mention the expense connected with the acquisition of property either in the shape of a site with buildings or arable land. From the Age of Hammurabi we have 132 contracts dealing with the purchase and sale of building sites, 43 where arable land changed owners. Whether we may here also be concerned with previous tenants who owing to prosperous circumstances attain to the position of owners our texts do not tell us, we can merely note that among the 175 purchasers 50 belonged to the priesthood. The price of land with fixed buildings was the highest, 1 *sar* (35, 3 sq.m) cost from $3\frac{1}{2}$ –81 shekel; in most of the purchases the prices range from 10 to 30 shekel, whereas 100 *sar* (3528.5 sq.m) of arable land could be acquired for 3–40 shekel.

The regular income of the farmer was derived from the sale of what remained of corn, sesame oil, and sheep's wool¹ after he had paid the amount fixed in the contract to the owner. Here we encounter the highly interesting fact that the prices of these commodities were fixed since the time of Manishtusu of Agade (2239–2225) except for three instances which will be mentioned below. Thus 1 *kur* of corn (121 l.) was the equivalent of 1 shekel of silver, the price of dates was identical with this. Olives are much dearer, 10–15 *ka* (4(–6)l.) cost 1 shekel, but it must also be kept in mind that the seed yielded 33 fold. As regards sheep's wool, which was originally pulled out, but at the time of Nabonidus cut off with iron knives, the price for (4–)6 *mana* or (2–)3 kg. was 1 shekel of silver.

¹ Cf. Th. Jacobsen, *On the textile industry at Ur under Ibbi-Sin* (*Studia Orientalia Ioanni Pedersen ... dicata* (1953), pp. 172–87).

But only three times in the long history of the Mesopotamian kingdoms after the time of Manishtusu do we note a fall in prices, the second time under the Second Babylonian Dynasty (1741-1430), the third time under Ashurbanipal (668-626). The Assyrian king Shamshi-Adad (see above p. 614) says in one of his stone tablet inscriptions: "When I built the temple of Enlil, my Lord, the market price (*māhīru*) in my town of 1 shekel of silver was 2 *gur* of corn; of 1 shekel of silver, 15 *mana* of wool; of 1 shekel, of silver, 20 *ka* of oil; paid in accordance with the market price of my town of Assur".¹ This denotes a halving of the prices of corn and oil and another greater reduction of the selling price. Through his conquests in the west, Shamshi-Adad controlled the Euphrates caravan route, and it may be this circumstance which brought a temporary wealth to Assyria that rendered possible a lowering of the prices of commodities of vital importance in the homeland. We do not know the causes of the still greater fall in prices under Singāshid of Uruk, who seems to have been independent in South Babylonia at the time of the Second Babylonian Dynasty. One of his three inscriptions issues the command: "During his rule of his kingdom each 3 *gur* of corn or 12 *mana* of wool or 10 *mana* of copper or 30 *ka* of oil shall be sold for 1 shekel of silver in accordance with the purchasing price of the country. The year (of his rule) was the year of plenty".²

In the late period under Ashurbanipal another fall in prices seems to have set in. In the royal annals we read that "in (literally in the middle of) my country camels were sold at the "purchasing gate" (*bāb māhi-ri*) for 1 to 1/2 shekel of silver".³ If we compare this with the price of oxen, asses, etc. and remember that camels were imported, we note a considerable fall in the price. But the conjecture that the cheap camels might represent a single lot from a large quantity of plunder is supported by the context.

Of sudden rises in prices we have little evidence. From Ibi-Sin's 7th and 8th year, about the time of Ur III's fall, two texts⁴ show quite appalling famine prices, denoting a rise of about 60 times the original

¹ L. Messerschmidt, *Keilschrifttexte aus Assur historischen Inhalts* I (1911), No. 2 (WVDOG XVI).

² SAK, p. 222.

³ V R IX, 48-49.

⁴ Cf. Th. Jacobsen, *JCS* VII (1952), pp. 41 f.

price; for 1 shekel of silver you can now only buy $2\frac{1}{2}$ *sila* of oil, or 5 *sila* of grain, or $12\frac{1}{2}$ *sila* of fresh fish.

§ 4. Trade with territories outside Mesopotamia was known as far back as the earliest Sumerian times. It was a vital necessity for the Babylonian country which, as mentioned in Chapter I, lacked raw materials: timber, stones and metals. These three imports were used daily. Even the humblest private house required wooden frames for the doors and tree trunks for roofing, while in more monumental buildings the foundations must be of stone in order to ensure the endurance of the temple or palace within a fairly measurable future. And the city communities must have weapons for their defenders which enabled them to reduce to a minimum the element of danger for the inhabitants. The armourer therefore always had his hands full, while the blacksmith and the locksmith had to produce the hardware required in the home market for city as well as country households.

The most coveted kind of wood was cedar (*erīnu*) owing to the length of the trunk and the strength and firmness of the wood. After Sargon's time (c. 2300) the Amanus mountains regularly provided this commodity, other localities were Lebanon, Anti-Lebanon, and the "cedar mountain" in the east, which we cannot localise with certainty. Of other woods may be mentioned *urkarīnu* (box?), cypress (*burāšu*), sycamore (*dulbu*), and *urumu* woods, of these the three latter were imported from the region round Lake Van and the Armenian highland, while the district round the Meluhha mountain (in Nubia) exported *ušu* wood, famed for its hardness, to Babylonia: "Like the depths of the sea thou breakest forth, like the *ušu* tree standest firm . . ." it says about the god Ningirsu in one of the Gudea inscriptions;¹ the alien wood was named after the hard stone dolerite.

Stone ware was imported from the western countries. Limestone (*pīlu pišū*) was the commonest kind, to which may be added the rarer sorts such as diorite from Magan, porphyry from Meluhha, basalt (*kašurrū*), dolerite (*ušu*), a species of basalt and marble (*parātu*), the latter coming from Anti-Lebanon. From the Arabian desert came the kind called gazelle (*pī šabīti*; bezoars?), and many other names are known of rare and coveted kinds of stone which, as mentioned in

¹ Cyl. A 8, 23-24 (SAK, p. 98).

Chapters IX and XI, were used together with costly woods in the building enterprises of the kings but which are difficult to identify.

The third import commodity of vital importance, metal, was copper (*siparru, erû*), which also came from the east (Elam) and from western countries (Magan, i. e. Oman on the Persian Gulf), perhaps also from Cyprus which, as we know, was a great exporter of copper to Egypt. Originally an alloy with antimon or lead was employed to produce the harder bronze, later these two metals were replaced by tin (*anâku*) which was fetched from Iran and was even known by the same name as lead. Iron (*parzillu*), on the other hand, did not come into use till the middle of the 2nd millennium, and did not become common until the late period; the Hittites of Asia Minor seem to have been the chief providers, but perhaps it came from an unidentified Armenian tribe living in the region called Kizwatna by the Hittites as well as from a place somewhere in Iran.

Before we pass on to the luxury articles, among which must be included certain woods and stone ware mentioned above, two more imports of great value in daily life must be mentioned: silver (*kaspu*) from the Taurus mountains, which soon replaced copper as a standard of value and circulating medium in addition to the corn measure; and the horse, which became fairly common after the Kassite period. After the time of Sargon, Rimush, and Gudea, silver was fetched from Taurus in Cilicia, while horses originally came from the mountainous districts in the east, and later on, when they were much in demand, were supplemented by supplies from Cilicia, Tabal (Ashurbanipal¹), and Armenia; the camel was imported from Arabia.

Gradually as the power, wealth, and area of Babylonia and Assyria increased, the importation of luxury articles which were originally only acquired by the governor of the city or the king, became more common. Gold (*hnrûm*), used as a unit of currency in the Kassite period, was imported from Egypt (the mountain district between the Nile and the Red Sea, later also from Nubia, Meluhha, and from Media). In the Amarna letters we read many a blunt request for more gold from the princes of the Middle East to the Egyptian king. Among imported precious stones used for decoration and ornament we may mention lapis lazuli (*nknû, zaginnu*) from Badakshan in northern Afghanistan or the Pamir mountains (NW India); sapphires from Media in western Iran, but

¹ V R II, 69-74.

probably imported by the trade routes from central Asia (Hindukush region); jasper (*ašpū*) which was fetched from the regions around Lake Urmia; beryl (*burallu*) which, according to its name, must be of Indian provenance; rock crystal (*šadānu*) from Armenia, the deep red *sāmtu* (cornelian?) from Meluhha; Amazonite from the Nilgiri Hills (Central India) or the mountains beyond the Baikal Sea; besides numerous others which we cannot identify. Mother-of-pearl (*nūnu mašdū*) was gained from mussel shells coming partly from the Persian Gulf, partly from the Red Sea. The royal gardens and parks were embellished by peacocks which were fetched from Arabia whither they had been imported from India. Further a large amount of finished articles were imported, such as costly pottery, ivories¹, bronze bowls, metal ornaments, and gala swords, etc. which were largely of Egyptian provenance.

The export trade was organised by commercial companies which have already been mentioned in Chapter X, and as a matter of course these also had the import trade in their hands so that ships and caravans had full cargoes and loads both to and from Mesopotamia. In the late period the trading companies were financed by banking firms. Thus we know "Egibi Sons" from Babylon and "Murashû Sons" at Nippur. Trade communications were facilitated by a regular postal service carried on by "royal messengers" (*mār šipri ša šarri*) who only had to suspend their service in times of unrest. From Neo-Assyrian times we know a kind of travellers' guidebooks in which the trading stations of the transit trade were entered. Properly laid out roads, rivers, and canals, a ferry service and bridges facilitated the speedy transportation of the ships' cargoes and caravan loads from Mesopotamia to neighbouring countries and remoter regions.

Communication with the western world took place by two caravan roads. The old trade route passed over Nisibis, Harran, and Carchemish, where the upper Euphrates was crossed on the way to the Cilician highland and the Amanus mountains. A more southerly caravan road ran from Nineveh to the river Habur, where the goods were reloaded into ships and carried to the place where the Habur falls into the Euphrates at Sirku (Circesium). From here the goods were transported along the caravan road to Tadmur (Palmyra), finally ending up in Damascus. We have no numerical evidence of how long these journeys

¹ Cf. especially the rich ivory finds from Mallowan's excavations at Nimrūd 1952-53 (*Ill. London News* 16.8.1952; 8.8., 15.8., 22.8.1953).

took. That they took a long time appears from the contracts mentioned in Chapter X. The duration of the journey of course depended on the amount of goods, the distance to the terminal station, and the number of the pack animals. From the latest time we have evidence that a journey from Jerusalem to Babylonia without any goods lasted a fortnight.

The Mesopotamian exports were of three kinds, corn, wool, and sesame oil; and that the export trade was very considerable appears from the fact that the sale of these three commodities formed the basis for the acquisition of the above-mentioned vitally important raw materials as also of the luxury imports of later times. The export of bitumen (*kupru*) and salt (*šābtu*) which are both found in the soil in Mesopotamia was not of any great importance but merely supplied the needs of the home market as a mortar in the erection of houses, and in the service of medical science. In the meanwhile we clearly visualise the fact that it was only in earlier times that the peaceful trade intercourse took place between Mesopotamia and the neighbouring countries where imports and exports were to balance. The Warka Period and the succeeding Jemdet Nasr Period (see Chapter VII) mark the culmination of this age of trading. But when we enter historical times the old exchange of commodities is supplemented by conquests and plunder, and taxes in the form of raw materials are imposed on the defeated alien peoples. Hence we realise that the prices of corn, wool, and sesame oil quoted above in this chapter can only with some reservation be regarded as prices charged abroad but are in the main meant for the home market. The export goods in times of peaceful trade intercourse were carried westward by the usual trade routes as well as to the eastern regions from which, as already mentioned, imports were fetched.

§ 5. At home many kinds of trades were followed in the cities; this occupation served solely to supply the needs of the home market. Originally, in Sumerian times, the crafts were associated with the royal household and the administration of the temples, and the relatively high wages paid within the various branches of the crafts and trades, e. g. in Lugal-anda's time afford evidence that it was work carried out to order and hardly a free occupation. On the other hand, from the time of Hammurabi we can regard the crafts as independent, since his Code towards the end, as mentioned in Chapter X, fixes the wages for

stone cutters, smiths, carpenters, shoemakers, shipbuilders, and masons. As early as Gudea's building inscriptions we hear of metal workers, smiths, stone carvers, carpenters, and stone cutters. The crafts seem to have been inherited and the various branches united in guilds. Shops where their work could be bought were found in special quarters of the town.

From late Persian times we know the duration of the term of apprenticeship for those who were to be trained in some craft. The longest term, 5 years, was that of a weaver's apprentice, a stone cutter's was 4, a fuller's $2\frac{1}{2}$ years, a baker's $1\frac{1}{4}$ years. The master received no pay for training the apprentice, but could exploit his working power for the benefit of his business, while the person apprenticing the boy to the master was to supply him with 1 *sila* of bread daily for the food of the apprentice whose clothes he was also to provide.

In the following crafts the raw materials of the homeland were used: the potter (*paḥaru*) made all kinds of pottery for use at the dining table, in the kitchen, and the store room; the miller (*kaziddaku*) ground the corn to flour, and the baker (*nuḫalimmu*) baked bread of it; the brewer (*bappirû*) made the much coveted strong drinks of the harvested emmer or the intoxicating date brandy, while the grape presser (*sîrâšû*) pressed the grapes, further prepared the juice, pressed the wine and casked it. Of other tradesmen may be mentioned the butcher (*tâbiḫû*), the basket-maker who produced all sorts of plaited work of rushes and reeds (baskets made water-tight with bitumen; receptacles; mats etc.); the weaver and the spinner, who prepared the sheep's wool and later on were aided by the dyer and fuller before the material could be given to the tailor to be made into wearing apparel; the shoemaker who made leather things, amongst others the different fashions of footwear from the various ages; and finally the perfumer (*raḫḫû?*). His field was a large one, he prepared oil of sesame for many purposes, and we call to mind that anointment oil (*pišṣatu*) was just as indispensable as food and clothes to a Babylonian. The anointment oil was perfumed with various scents derived from plants such as myrrh (*murru*), saffron, myrtle (*asu*), cedar, cypress, and "galingale" (*suâdu*). The perfumer further produced oils for religious and medicinal purposes and a number of cosmetics as e. g. *guḫlu*, known to the Romans under the name of *stibium*, which served to beautify the surroundings of the eyes, in addition to a number of pastes used partly as make-up, partly

to paint walls with, and a kind of soap, made of oil and potash or another alkali. The hairdresser had many customers in his shop who came to have their hair cut or dressed and anointed, while in private he removed hair in the arm-pits and on the pudenda with auri-pigment.

Dependent on the imports of wood, stone, and metals were the trades of the carpenter and cabinetmaker (*naggáru*), who made furniture, doors, and carriages, while the ship-builder (*naggár elippi*) launched the various types of boats built by him on the river, and sold them there. The stone cutter supplied mill-stones and overlying grindstones (*nar-kabu*) for mills and private households; and the seal-cutter (*burgullu*) produced in hard foreign kinds of stone the indispensable cylinder seals which besides a more or less artistically executed mythological or realistic scene might record the owner's name, occupation, and town domicile, and which, pressed into a wet clay document represented the owner's signature with fully binding legal obligations. The imported metals, copper, and later lead, tin, and iron, magnesite (*abáru*), antimony (*guḥlu*), and tin, were worked in smelting furnaces with blowpipes or bellows by the metal worker (*ḫurḫurru*) and smith (*nappáhu*) and cleaned from impurities; copper underwent the process of alloying (*bullulu*), and afterwards all kinds of weapons and metal implements were made of it. The jeweller, who in Babylonia as with us was called "goldsmith" (*nappáḫ ḫuráši*) executed all kinds of gold work, often ornaments with precious stones, such as sapphires, jasper, emeralds (*barráktu*), cornelian, onyx, chaledony, agate, and rock crystal; inlaid mother-of-pearl and carved ivory work was also executed by the jeweller; the beautiful silver vase belonging to Entemena of Lagash with the heraldic engravings testifies to the high standard of the goldsmiths' workmanship already in pre-Sargonic, Sumerian times.

§ 6. Our knowledge of the Assyro-Babylonian dress is mainly derived from representations (in statues, reliefs, or on cylinder seals) of kings and persons of high rank. Above on p. 593 we have conveyed some idea of the dress of the propertied classes in Assyria. From other evidence it seems certain that roughly this description applies to Babylonia as well as Assyria for the time after Hammurabi. But of course the fashions, originating in the home country or under foreign influence, must have set their mark on the details of the wearing apparel through

the more than 2000 years in which we can follow Mesopotamian culture through the excavated monuments. This applies not only to the cut and the external ornaments in the shape of embroideries, fringes, flounces, trimmings and the like, but also to the details of headgear, footwear, and underclothing. The uniforms of the soldiers have been mentioned in Chapter XI.

It is very difficult to follow chronologically the changes in dress, and it is quite impracticable as far as women's dress is concerned, where the material leaves us almost without any information whatever, especially on Assyrian territory. We shall therefore merely, in what follows, call attention to the broad features and point out some details, but otherwise let the description of the royal costume in Chapter XI stand as the norm: an undergarment with sleeves, over which was worn another garment reaching the feet, was fastened at the shoulders and kept in at the waist by a girdle.

In early Sumerian times the men had all the upper part of the body uncovered, and from the loins to the feet wore a petticoat-like garment of sheep's wool, smooth material, or it might be fringed or frilled (*kaunakes*), as seen e.g. in Ur-Nina's reliefs (c. 2450); women seem to have worn the same kind of garment but with the left shoulder and breast covered. Several reliefs show us the entirely nude male figure, but these represent religious rites, often in the presence of gods, so that the nudity of the priest or the citizen is a part of the cult ritual. From Sargonic times the upper part of the body becomes entirely covered and a sheep's wool garment reaching the feet replaces the ample loin skirt. The dress is now rarely fringed except at the seam, but made of a smooth woollen material. Hammurabi seems still to have used this garment, but the long-sleeved undergarment, over which a mantle-like upper garment is worn, dates from the Kassite period. We now approach the stage of fashion represented by the above-mentioned Assyrian royal robes, which are now retained in their main features even though we see both Cappadocian and Hittite mantle fashions worn in Mesopotamia.

The winter and the colder regions of northern Assyria might require a further protection against the climate. While sandals of different types and shoes, and perhaps laced boots, served as footwear in peace time and war time, we know of long woollen stockings from the reliefs in Sennacherib's palace at Nineveh. From the time of Gudea to Neo-

Babylonian times the head was protected against the sun and cold by a cap-like headgear varying very little during this very long period; it is roundish in most periods, pointed in the Ur III Dynasty (Shulgi). The special headgear of the kings down through the ages was a pointed cap, a helmet ornamented with horns, a fillet, besides the special forms of Babylonian and Assyrian crowns. Trousers which are familiar from the Hittites of Asia Minor and from Palestine were unknown in Mesopotamia, and the conjecture that a cylinder seal from the Age of Hammurabi shows the use of trousers as underwear has not yet been confirmed by other evidence.

Of women's dress the only certain evidence we have is from the time of Gudea. We refer to the beautiful and well preserved figurine which E. de Sarzec found during the excavations in Telloh. A thin kerchief keeps together the well-dressed hair which falls in curls over the forehead and temples and is gathered into a large heavy knot on the nape of the neck, the naked neck is ornamented with a heavy torque ending in a broad plate in front. The upper part of the body, the only part preserved, is dressed in a close-fitting undergarment of thin stuff, the neck opening of which is almost square; over this is worn a plain close-fitting upper garment the sleeves of which are half-length, ending at the elbows; the simple dress-like costume is ornamented with embroidery both on the upper and the under garment. This female dress is that of a distinguished lady and a parallel to that of the Assyrian king. Women's dresses were as a rule plainer than those of men; with women ornaments were a substitute for magnificence of costume. As already stated in Chapter XI, married women and modest young girls wore a veil in the presence of strangers and in the street.

The colour of the clothes was probably grey or greyish yellow. On festive occasions white clothes were worn, for mourning dark-red, brown or black. In addition to their nice clean clothes the Babylonians possessed dirty and ragged garments which were worn for the penitential ritual, and on the special, ill-starred days of the month, perhaps also when a death occurred, and were used by the day-labourer and the farmer during the performance of their daily tasks.

The hair and beard might be dressed in many ways in historic times in Mesopotamia. As a main rule the Sumerian male had the hair and beard shaved off, while the Semitic Babylonians and Assyrians wore the hair long, hanging down their backs, and had a large beard. The

length may vary as well as the character of the hairdresser's ringlets in the hair and beard (now in horizontal, now in vertical lines), the upper lip may be clean-shaven (Hammurabi), the lower lip too might be shaven, or the moustache might be curled upwards or sideways; in the Kassite period the beard was worn short, skipper fashion. Women preserved their full head of hair in Sumerian times, despite the masculine fashions. A good example of the female way of wearing the hair in the time of Gudea was mentioned above. From Babylonian and Neo-Babylonian times we have examples of ingenious female coiffures: sometimes the hair is curled and rather short, with two longer ringlets hanging down on either side, sometimes it is dressed on the top of the head, rolled up in the shape of a ball of wool, sometimes we see a coiffure consisting entirely of concentric curls falling deep down over the forehead. Fillets may keep the hair in place, wigs supply the place of lost hair.

§ 7. Apart from kings and people of high rank the life of the Babylonians was very simple. The average house of an ordinary man was mentioned at the beginning of this chapter, and from lists of marriage portions we see that the furniture was of the simplest description possible: one, at most two beds, 5 chairs, a foot stool, and a table top. Wood being expensive, the furniture was often made of cane or even of clay (cp. the clay bench in Tell Asmar's "Arch house"). Reed mats as hangings for the walls formed a substitute for textiles among the less affluent. The rest of the movables of the house consisted of the hand-mill for grating and grinding the corn, a brazier, kettles, various vessels, goblets, bowls, and lamps. As far as we can judge from the finds, everything was made without great skill, cheap objects for the common purchaser. Finds of gaming boards for pastime go as far back as the Ur I Dynasty (c. 2450). Bathing in the river was unknown, but later baths were found on a flooring of bitumen in the houses of more distinguished people; a drain pipe carried the water outside the house.

§ 8. The food, as among all orientals, was mainly vegetable; in the late period the meals were taken lying down on bed-like couches. Meat was only eaten on exceptional occasions, and often consisted of

portions of a sacrificial animal. But the Babylonians were very partial to a meat diet even though they only had it 3-6 times a year. In farming contracts we often see the stipulation that the owner is to have a piece of meat in addition to the usual dues. The linguistic as well as the actual distinction between "meat sheep" and "wool sheep" also shows that wealthy people feasted on roast lamb. The price of a tenderloin was 20 še.

Well-to-do people might eke out the butcher's meat with pigeons, fowls, ducks, and geese, as well as game birds which were caught on shooting expeditions by the professional hunter. Of other results of the chase which were seen on the tables of the well-to-do may be mentioned meat of the gazelle, hare, deer, and wild ass. Xenophon, *Anab.* I 4 mentions the latter as very tasty. The meat was served boiled or roasted, so that soup (*mê šêri*) could appear on rich men's tables.

The needs and purchasing power of ordinary men differed, but so far as we can see, food was present in such quantity that theoretically all could be supplied. But crop failure, hostile invasions and sieges might cause a rise in prices so that the common man had but little prospect of buying the expensive scarce commodities. During a period of famine 20 *sila* of corn cost 1 shekel of silver, while the normal price in Neo-Babylonian times was 1 shekel for 180 *sila* of corn; indeed, during a siege 3 *sila* of corn were offered in the black market for 1 shekel of silver.

In peace time the staple nourishment of the common Babylonian was barley bread which was baked in thin layers at the baker's, or at home by the slave women. With this might be taken radishes, cucumber, dates, pomegranates or grapes, as circumstances permitted; in northern Assyria also figs, apples, and pears. Wheat cake (*kamānu*) or "sweat bread" was only eaten by ordinary people on festive occasions. Barley bread was the main part of the meal, but the favourite dish of the population was a porridge (*isurrû*) made of flour in which curds and whey and honey entered as ingredients, often mixed with minced vegetables; of these ingredients combined with oil, milk, and butter various vegetable courses were furthermore stirred together. The food was flavoured with salt, which we saw above was found in the upper strata of the earth in Mesopotamia. Carps from the Euphrates, fried, boiled, or salted, might be added to the meal or mixed with the food.

The Babylonians often praise the cool water which they took with their meals, and which they carried with them on journeys in leather-jacks and sacks; as a means of nourishment, however, they drank goats' milk and cream (*luḥdu*). Only people who were economically independent had the expensive "mountain wine" in the house, while wealthy citizens might add zest to the meal by strong drink in which water and wine were ingredients, or which had the character of beer and gin made of barley, emmer, and dates. Less affluent people, on the other hand, went to a beer-house to enjoy the intoxicating drink that gladdens the heart.

When the bread was made at home it was baked in ovens. For boiling and roasting there was the brazier (*kinûnu*), which radiated warmth in the raw winter, and therefore is also known from humbler households where roasting was unknown. The fuel used by the rich was charcoal (*pîntu*), while ordinary people used twigs of *ašaggu*, a desert thistle growing by thousands in the desolate regions outside the civilised areas, or dried dung.

§ 9. The family formed the basis of the community. Marriage was monogamous, the chief pillars being the husband and wife and children, if any. Everything concerning betrothal, the marriage ceremony, the marriage portion of the wife, the relation to slave women and concubines, as well as divorce, inheritance and adoption, right of succession, and the portion of widows, has already been discussed in Chapter X, where we mentioned the family law of Hammurabi's Code. Hammurabi's laws established marriage as a mainly monogamous institution and protected the rights of the wife, fixing severe penalties, as e.g. capital punishment, for marital infidelity. And we have several instances of a warm and beautiful devotion between husband and wife. In practice there will probably have been difficulties, partly on account of the presence of slave women in the house, not to speak of the concubine, partly because beer-houses and bars as well as the local brothel had their great attraction for the master of the house. There were bound to be complications too if the wife remained childless, the demand for descendants being imperative among the Mesopotamians, as we shall see, and if the slave woman bore children to the husband. Among better-class people the women

of the house were isolated in a harem, and the wife could only leave this if she was veiled.

Indirect as well as direct statements afford insight into the ethics of the Babylonians, if we can use this expression which in Mesopotamia covers both the respect for the clauses of the police regulations and the disposition shown towards others in intercourse with one's fellow-creatures, so difficult in daily life. Through a series of negations in Tablet II of the incantation series *Šurpu*, we see a kind of indirect interdiction of offences of highly differing ethical value. One must not breed discord in families, set a son against his father, for instance, or make mischief between friends, nor despise one's father or mother, offend an elder sister or hate an elder brother. And promises must be kept, but all foul and brazen talk must be avoided, nor must one be a hypocrite, the mouth saying yea while the heart is full of nay. Through these interdictions the Babylonians showed their appreciation of a clean heart, and even though the demands hardly soar to eagle heights they form a sober but also a self-evident foundation for the regulation of men's intercourse with each other.

Most of the other interdictions are directed against delinquents who know that those who enforce the commands of the state will intervene by police action when transgressions occur. They are the interdictions universally known against murder, theft, and adultery, using false weights, counterfeit money, defrauding widows and orphans of their rightful heritage, falsifying field measurements, exercising one's own judgment in the case of boundary stones, etc. We meet with these prohibitions everywhere in urban civilisations as evidence of the wickedness of men in all times, but necessary because a human community can only by means of the fairly complete enforcement of these interdictions be kept up to a standard that will ensure relative security for decent people.

Soaring to higher flights we find the contents of the tract which has been ascribed to Utnapishtim (or *Umnapishtim*), the hero of the flood, as a warning to his children; the tract has been cast in poetical form with strophes of three or four lines, in part badly preserved. Three copies are known, two from Ashurbanipal's Library at Nineveh, and a connected passage where the text is well preserved may be rendered approximately thus:

"Slander not, but speak kindly,
 Speak not ill but show goodwill,
 He who slanders or speaks ill,
 Retribution shall befall him from Shamash.

Make not thy mouth large, preserve thy lips.
 If thou art angry, speak not at once,
 If thou speakest with a hasty mind, thou wilt pay for it afterwards,
 But with silence thou shalt soothe thy mind.

Daily thou shalt make sacrifice to thy God.
 Supplication and the incense pleasant to the God,
 Keep a clean heart before the God,
 That is what is worthiest to the God.

Prayer and invocation and prostration before him
 Thou shalt bring him early, and thy strength will be great,
 And in the very highest degree it will lead thee with God.

In thy wisdom learn from this tablet
 Fear of God brings grace,
 Sacrifice furthers life,
 And prayer absolves sin."¹

Here is drawn the ideal image of a kindly and soberhearted man, whose talk is honest and kind, who does not flare up in anger, the man who with natural piety brings offerings and incense to the god (of his city) and who confidently calls upon him in prayer. It is a noble ideal of a man which has here found expression, and of extreme importance in the daily intercourse with other people. As already stated, the moral tract has come down to us in three copies, which would seem to show that it was widely known.

But it must not be forgotten that while well-to-do people might find time to keep in view the male ideal of the tract, and perhaps try to realise it, the life of more than 90 p. c. of the population took the form of an endless chain of toilsome days filled with intense labour.

¹ K. 8282 + K. 7897, Reverse (K. D. Macmillan, *BA V* (1906), pp. 622-23 and *St. Langdon, PSBA XXXVIII* (1916), p. 136).

When we described the river and canal system of Mesopotamia in Chapter I, we pointed out, for the first time in this narrative, how hard and exhausting was the life of the Babylonians in their struggle with the waters. To this we later added a survey of the hard life of the farmer with the drudgery of ploughing, hoeing, and sowing the heavy soil of the fields, and the trying harvest time when 33 fold were stored in the silos. But not only was he weighed down by this heavy burden of work, but also by the insecurity of life. First of course the palpable insecurity. Some years the capricious pressure of the waters might require great efforts and then nevertheless the result might be that they could not be stopped and floods would ensue. Further, years of famine and cattle-plague, sickness among the willing workers might occur, or hostile attacks from foreign peoples owing to the king's mistaken foreign policy, or defeat by enemies.

But all this grim insecurity was after all temporary, the Babylonians knew that once a year, Marduk, the chief god of their country, thoroughly vanquished and conquered Tiâmat, the demon of the waters, and restored the world as a cosmos. The broiling summer sun was a stern master, but the experience of centuries had taught the Babylonians that this master did not rule forever, and that a comforting autumn rain followed hard upon his heels. But what produced the gloomy view of life and was worse than the hard work was the universal uncertainty, the insecurity which was a result of the activity of the demons.

Unseen, but known by name, they were felt everywhere, every occurrence, whether lucky or more often the reverse, was governed by a particular crowd of demons, every disease was their work, every unfortunate incident was a result of their activity. When a person or a farm animal was attacked by such a demon it must be exorcised, or life would be at stake. Man's mind became divided against itself and as if cursed by the gods. Therefore the Babylonian took refuge in the temples where the *âšipu* priests by a ritual incantation (Sum. *en₂*, Akk. *šiptu*) were able to exorcise the evil demon. The ceremony was lengthy and complicated, and numerous were the incantations and rites carried out in a special shrine, *bīt rimki*, "the house of ablutions", where the ritual purifications with water took place, before the power of the demon was broken.

Men may be wicked, slack, indeed, even those with the best of intentions may stumble, this is the experience all over the world through all the ages, and each must pay for his slips and misdeeds. But the Babylonian insecurity brought about by the demons was something quite different, since the actions and dispositions of men were independent of the attacks of the demons, who had not been sent by the gods as a punishment for man's transgressions. The belief in the blind activity of the demons is therefore the Babylonian expression of a solution of the problem of evil. The gods retained their creative, ordering, and protective power, while the evil germinating in men's minds and actions, or unexpectedly manifesting itself in sickness, sudden death, unfortunate happenings, war, years of scarcity, inundations, cattle plague, etc. etc. was the sole result of the activity of demons.

But the Babylonian was not like the Iranian, his neighbour in the east, a collaborator in a great world drama, where the absolute dualism between good and evil was the foundation, and where man could choose his faith, choose to which realm he would belong. The world had been created by Marduk once in the dawn of time and ordered for the best; and at the New Year's feast, *isinnu ša akīti*, the creation of the world was each year repeated ritually, with the victory over the violent pressure of the waters and the following holy marriage (*ἱερός γάμος*) where the fertility of the year to come was created by a single prototypical act. The world that unfolded itself to the eye as far as man's vision could reach was a perfect work of art, a cosmos, this was warranted by Marduk's creative activity, and in company with many gods he watched over its constant maintenance. But everything evil, in the climate as well as in the minds of men, their actions and words, as also the evil that manifested itself as disease and accidents was due to the work of demons. And men were only able to break their power by having recourse to the gods and winning the victory by their aid within the precincts of the temple.

But the general insecurity remained, was permanent throughout life. It was of no avail that man tried to act rightly, to think rightly—the demons could not be uprooted: sudden disease in the form of fever befell both the righteous and the unrighteous. It is at this point that the perplexity of the Babylonian must grow, the problem

could not be explained, the insecurity could only be exorcised for a short while by the power of the incantations. And by special decrees to the effect that the 7th, 14th, 19th, 21st, and 28th days of the month were "unlucky days" (Sum. *ud hul-gal₂*, Akk. *innu linnu*) the state had officially recognised the insecurity caused by the demons, though it did not on that account guarantee the safety of the other days of the month. On the 7th day, it says in the *Inbu* series, "the shepherd of the myriads of men (i.e. the king) must not eat meat cooked over charcoal or baked bread, not change the garment he wears on his body, not put on clean clothes, not offer any sacrifice, the king must not drive in his chariot, must not issue commands. In "the place of the mystery" the *bārû* priest (the soothsayer) must not perform any (ritual) act, the physician must not treat a patient, (the day) is not fitting for the performance of any undertaking".¹ Judicial decisions too were forbidden on these days.

A hard life full of toil and trouble and added to this the general insecurity caused by the fear of demons, and placed in the midst hereof the Babylonian, dismayed in the presence of the fundamental problem of evil. Evil could be checked for a time, but it was still there, hence Marduk must wage war against Tiāmat at each New Year's feast. And behind the grave no glimmer of light or solution of the problems was in sight, for to the inhabitants of Mesopotamia all was over with the supervention of death. Other peoples have fabled a solution, the balance between good and evil being adjusted in the hereafter; and by the idea of reward and punishment they have partly saved the might and omnipotence of their gods, partly settled their account with the scoundrels of this world. But the Assyrians and Babylonians kept their path clean and only recognised manifest realities. Their belief in demons only referred to the facts of life, it was their attempt to explain to themselves the reality of evil in face of the perfect creative work of the gods, and by the ritual of exorcism they were able temporarily to overcome the demons.

§ 10. Their belief that all was over when death supervened was expressed by the Babylonians in two monumental works, the theological *Adapa* myth and the sanguinary epic of *Gilgamesh*. It is

¹ IV R 32, 28 ff. cf. B. Landsberger, *Der kulturelle Kalender der Babylonier und Assyrer* 1 (1915), p. 120. (LSS I VI 1-2).

difficult to date the literary remains of the Mesopotamian cultures, and the circumstance that the Sumerian language was constantly used in the sacred rites as well as in the literature right down to late ages does not facilitate our task. But the fact that we know the literature in the main from late copies, e.g. from Ashurbanipal's Nineveh library, will not confuse us. And roughly we may rightly conjecture that central parts of the epical religious literature (the Gilgamesh Epic; Ishtar's Descent; the Epic of the Creation) were composed in the period from the Isin and the Larsa Dynasty to and including Hammurabi's reign, a period which, as we saw in Chapter IX, was of a fundamental social and state-revolutionising character.

The Adapa legend must have been composed at a time when Marduk was not yet the chief god of Babylonia. In the epic the latter is called Anu, originally the god of Uruk, the dominating city in the earliest times (see Chapter VII), and probably he owes his passing position as chief god of the South Babylonian Sumerians to Lugal-zaggisi's unification of the kingdom in the south (2313-2289). Since, however, official state gods must always in their exaltedness and remoteness have seemed very distant to men, other gods, above all the local city gods, were invoked. Enki, "Lord of the Earth", i.e. the god of the inhabited and cultivated landscape, was such an important local god in the southernmost city area of Eridu at the Persian Gulf. As the lord of fertility Enki had power over the ground-water and the springs of the earth, and was permanently associated with all the water that fertilises, cleanses, and protects. His Akkadian name E-a means "the abode of the water". Being the lord of the water, he was the patron deity of all incantation ceremonies and thereby he became the most prominent protector and helper of mankind; in certain texts he is also seen as the god who has ordered all things on this earth and finally created the king and mankind, and in the epical poems (Gilgamesh and Adapa) he appears as the counsellor and benefactor of men, helping Utnapishtim when the flood comes.

Adapa was a priest at Ea's shrine in Eridu, and on a fishing expedition he quarrelled with the south wind which had capsized his boat and broke its wings in a victorious fight. Anu, who for seven days had missed the blowing of the south wind, grew angry and summoned Adapa to his heavenly abode. Ea gave Adapa the following advice before his journey:

"When thou enterest into the presence of Anu,
 They will offer thee the food of death.
 Do not eat. The water of death will be offered to thee.
 Do not drink. A garment they will give thee.
 Put it on. They will offer thee oil, anoint thyself.
 This knowledge I have given thee, do not reveal it.
 The words I have told thee, keep them to thyself."¹

When Adapa appeared before the throne of Anu the latter's anger had subsided, not only had the supreme god forgiven Adapa his offence against the south wind, but he wished to surpass Ea in benefits to mankind. He called for "the food of life" (*a-ka-al ba-la-ti*) and "the water of life" (*me-e ba-la-ti*) for Adapa, who declined both and merely put on a new clean garment and anointed himself with oil, as is fitting for the well-bred Babylonian. Anu wondered greatly and could merely reply: "Take him (back) to his earth (*ga-ga-ri-šu*)".²

This is cunning talk. Those who knew no better might well be persuaded that man, at the dawn of time, had lost the right to immortality which only the gods possess, owing to Adapa's formal blunder in the heavenly audience hall. But those who took thought knew very well that Ea was man's best friend. They could also remember Sabitu's words to Gilgamesh (see below p. 679) when in his search of knowledge about immortality he had reached her throne by the western sea.

The Gilgamesh Epic,³ the twelve tablets of which have unfortunately come down to us in a very fragmentary condition, depicts in strong colours love, friendship, and strife, and draws an ideal picture of the great man of the Babylonian land. The friendship between Gilgamesh, king of Uruk, and Enkidu (Eabani), who have triumphed on their war-like expeditions, is abruptly broken off by Enkidu's death (Tablet VIII). After the lamentation for his friend is over, the thought crosses the mind of Gilgamesh that like Enkidu he himself must die one day: "I fear death and roam restlessly over the plain" (Tablet IX 5). Here he is the mouth-piece of all the Babylo-

¹ VATh 348, Obv. 28-34, see H. Winckler und L. Abel, *Der Thontafelfund von El Amarna II 2* (1890), p. 166 b (*König. Mus. z. Berlin. Mitth. aus den orient. Samml. II*).

² *Ibid.* Rev. 34.

³ In the following R. Campbell Thompson's text edition (1930) is consulted.

nians whose lives are happy and beautiful, in their setting of wealth, ease, and love, with offspring, and victory in fighting. For death often comes suddenly. The dirge which is erroneously ascribed to an unknown king Tâbi-utul-bêl, living in Nippur, and which is older than Ashurbanipal's Library, as is shown by a duplicate from Sippar, touches upon the same thought:

"He who was still alive in the night, today he is dead,
Suddenly he is eclipsed, swiftly he is crushed.
(One) moment he is singing and playing,
All of a sudden he howls like a wailing man,
Like light and darkness their (men's) minds change."¹

Gilgamesh journeys to the extreme west in order to find out whether all men are to die like Enkidu, himself included; he remembers that Utnapishtim dwells there, a human being like himself, but immortal. The Gilgamesh Epic is hardly meant to be a discussion on the problem of death and immortality or to show us the Babylonians' gigantic attempt to deprive death of its victim, inspired by men's yearning for immortality. On the other hand, Tablets IX-XII give the audience and the reader a poetised lesson in which the absolute reality of death is established on theological grounds, accompanied by cunning irony, in the story of the serpent and the magic herb.

Utnapishtim tells Gilgamesh of his fate, which is the great exception (Tablet XI). Thanks to Ea's advice and guidance he and his wife escape the great flood and are addressed as follows by the latter when the ravages of the deluge are over: "Formerly Utnapishtim was a human being (literally: (he had) humanity, the quality of being human), now Utnapishtim and his wife are to be like gods (*ki-i ilâni*), Utnapishtim shall dwell far away by the mouth of the streams" (Tablet XI 193-195). When Utnapishtim was a human being death was his lot as that of all others, now he has become like the gods and is immortal like these, but Utnapishtim is the exception that confirms the rule. And Gilgamesh's brief ownership of the magic herb *šîbu iššahîr amêlu*, "old man grows young (again)" (Tablet XI 281), which a serpent carries off while he is asleep, establishes the same doctrine: death is the common lot of all, this applies

¹ *Tâbi-utul-bêl* Obv. 39-43 (IV R 67, cf. V R 47).

unconditionally to kings and to humble people, and he who is old cannot be rejuvenated and live life over again. Sooner or later, his lot is death.

On Tablet X Sabitu (Siduri) has, in a purely dogmatic theological way, formulated the same train of thought in her answer to Gilgamesh: "Thou wilt not find the life thou art looking for. When the gods created man they fixed death for man and kept (eternal) life in their own hands."¹ But Sabitu is not content to establish that the entrance of death into the world can be traced back to the first day of creation, she shows Gilgamesh the glory of this life and bids him enjoy it with a will: "Let thy body be filled (with meat and drink), be glad day and night, keep a feast of joy every day, dance and rejoice day and night, let thy garments be clean, wash thy head, bathe in the water, look (with delight) at the child that takes thee by the hand and let her with whom thou sleep (*mar-ḫi-tum*) rejoice at (the strength of) thy loins (*su-ni-ka*)."²

Death as the absolute termination of life must have been taken for granted by all the inhabitants of Mesopotamia. Hence eternal life is never mentioned in the great kings' prayers and supplications to the mighty gods. But Nebuehadnezzar prays in his inscriptions: "Make my days long, fortify my years, let thy mouth determine a long life (for me) and let me be satiated with descendants."³ And to the well-to-do classes of the population a long life in peace and happiness with a numerous posterity was likewise the crown of existence. But we must remember the hard toil of the poorer classes, then we can understand that the Assyro-Babylonian outlook excluded any wish to continue life forever. Hence it is true Babylonian wisdom we find in the Adapa legend that it was Ea, man's best friend among the gods who once in primeval ages prevented man from obtaining a share in eternal life.

§ 11. Sabitu's invitation to Gilgamesh to enjoy life in all its glory was presumably open to everyone to live up to, if the joy of having a wife and children was meant. Kings, great chiefs, and well-to-do people could make their lives a feast, and in their rich houses and well assorted harems they had a fine outer setting. To the humbler

¹ VATh 4105, III 1-13 (B. Meissner, *MVAG* VII, 1 (1902), p. 15).

² E. g. V R 34, III 43-45.

classes, hard-worked tenant-farmers, day labourers, with their life of toil and their poor houses, visits to the beerhouse and the brothels meant festive hours when life was enjoyed to the full. But even better-class husbands to whom the slave woman was a mistress who felt it as a slight if "he did not tear off her garment" (*lug₂-ba šu-nu-si-ga*¹ = Akk. *šu-bat-sa la iš-ḫu-ḫu*) sought diversion and entertainment outside the house.

The beerhouses and bars (*bīt šikāri*, "the house of the intoxicating drink") were as a rule managed by women. From Persian times, however, we have examples of slaves opening beerhouses after obtaining loans from their masters. The Code of Hammurabi imposed very severe rules (see Chapter X) which were designed to protect the customers against extortion and which prohibited silver as legal tender in the taverns, both provisions attesting their great popularity. Admission was forbidden to priestesses, but not to other women, at any rate the beerhouses were the haunts of harlots. The furniture generally consisted of five beds, 10 chairs, and 3 tables, which shows that the premises were small. To make up for it the number of beerhouses was great.

Date wine and beer, both called *šikāru* (Sum. *kaš*), "the intoxicating drink", were served without stint to the customers in the beerhouses. In Assyrian letters we come across complaints of drunkards who draw their swords in the open street and annoy foot passengers. 1 *kur* of dates was used to make 1 barrel of *šikāru*, while the brewing of 100 *silā* (40 l.) of beer took 72 *silā* of emmer, 12 *silā* of "beerbread", and 96 *silā* of *buḫlu* (malt?). The beer served was of different qualities, such as "black", "strong black", "red", "fermented", or "strong" beer.

Wine (Sum. *geštin*, Akk. *karānu*) was expensive and was probably only served to better-class customers, most of whom took it in the form of sherbet (*šābtāti*), i. e. water mixed with wine and fruits. But the gods drank wine and did not stint themselves: "The sweet wine turned away their fears and while they caroused, their bodies became distended, they grew very tired", we read in the Epic of the Creation (III 135-137)² in reference to the festive banquet in their lofty

¹ II R 35 No. 4, 68-70 (fragments of bilingual sentences).

² Here as in the following Antonius Delmel (1912) and René Labat (1935)'s text editions of *Enuma elish* are consulted.

halls. And the governors of the cities filled their store-rooms with "mountain wine" already in Sumerian times (Lugul-anda, Urukagina), while from the time of Gudea the vine was grown in the homeland. It was, however, chiefly in northern Assyria that the vineyards assumed large dimensions; we possess a tariff enumerating 10 different sorts of wine.

While intoxicating drinks were taken at home or at the beerhouse, free love was practised everywhere: "The man did not lie on the young girl in the street (*ina sūki*)", says a regretful passage in the epic on Ishtar's Descent into the Underworld¹ when her temporary absence from the world stops all mating on earth, and in the Assyrian laws public squares are described as places for the gratification of love (p. 610). Other texts mention fields and gardens as well as "closed streets", *cul-de-sac*. In drastic terms the first tablet of the Gilgamesh Epic describes how the harlot (*šamḫatu*) is embraced by Enkidu: "The harlot uncovered her breasts and spread her legs, and he possessed her luxuriousness; she felt no shyness but took his swelling (*na-pis-su*, i. e. phallos), loosened her clothes, and he lay on her. She did a woman's work, made him lascivious, and his muscular strength rested on her back (*eli šēri-ša*)" (Tablet I, Col. IV 16-20). The Babylonians were experienced in the art of love, from a passage in a liver omen² (i.e. an omen taken from the liver of a slaughtered animal) we see that young people practised paedieatio, analcoitus, in order to avoid pregnancy. From the above-cited Gilgamesh passage as well as from pictorial representations it is seen that coitus a tergo was the normal position at the gratification of love.

To those who did not find intimacy in the streets and public places there were the brothels (*ašar mēlulti*, "the place of pleasure"; *bīt zikrēti*,³ "the Phallos-House"). Here the interned prostitutes lived, *ḫarimtu* or *ḫarmatu*, while another term seems to have been used about the prostitutes of the streets, *šamḫatu* or *šamuḫtu*; of a third class of girls, *kizrēti* (only in plur.), mentioned already in letters from Hammurabi's time, we know nothing with certainty to distinguish them from the other two kinds. The prostitutes loitered in the streets and squares and in beerhouses or "sat at the door of

¹ CT XV (1902), 46: Rev. 8.

² K. 8325: CT XXXI (1911) 44, 10.

³ BM 28436, Obv. 9 (CT XXIX (1910), 7).

the brothels".¹ No text tells us what they were paid in advance for their good turn. But that the occupation was financially satisfactory, at any rate for the girls kept in the brothels, may be seen from the fact that *ḥarīmāti*, as well as the women who performed the religious love rites, and whose income was substantial, were taken as wives in Babylonia. For in "The Exhortation of Utnapishtim" (pp. 671-72) a warning is issued against it: "Do not wed a *ḥarīmtu*, whose men are thousands, (or) an *īštarītu* (i. e. one who serves Ištar the goddess of fertility and love), who is wedded to the deity, (or) a *zēr mašītu*."

While ritual love will be discussed in connection with our description of the religion in Chapter XIII, it will be natural here to mention some of the external details. In popular speech those who assisted at ritual love were called *īštarītu*, as in our quotation above from the moral tract under Utnapishtim's name. All who practised religious love lived in a special complex within the temple precincts called *gagū*. The inmates were divided into two classes: *enāti* (sing. *enītu*), "the brides of the god", the Sumerian *nin-dingirra*, who served at the dramatic fertility cult in which they entered into "holy matrimony" (*ἱερὸς γάμος*) with the god of the temple. Perhaps they were transferred to a special habitation on festive occasions (*e₂-gi₄-a*, Akk. *bīt kallātu*, "the bride house"). The other class was called Sum. *nu-gig*, Akk. *zēr mašītu* (p. 556) and served the citizens of the town and travellers in *bīt aštammi* (Ass. *bīt altamīnu*, see p. 555) at the great religious feasts, as on other occasions. Perhaps *ḫadištu*, "heirodul" was the common term for both these classes. The word means "the cultically pure" which is entirely in agreement with the place that love, the gods' most glorious gift to mankind, occupies in the religious ritual, where the performance of the wedding ceremony denotes the climax of the cult.

§ 12. Death is the common lot. It spares no one, and nobody knows when the day of his death will come. We do not build our house for eternity, we do not seal (documents) for eternity, do not share brotherhood forever, any more than the river rises forever, bringing the flood tide with it. The gods determine life and death, but "the day of death

¹ G. Reissner, *Sumerisch-babylonische Hymnen nach Thontafeln griechischer Zeit* (1896; König. Mus. z. Berlin. Mitth. aus d. orient. Samml. X), No. 59, 49.

is not proclaimed", says Utnapishtim to Gilgamesh (Tablet X 6, 26-39). At the coming of death the burial rites (*kispu*), which are comprehensive and complicated, begin. The corpse is covered with a linen cloth, "he enveloped his friend (i. e. Enkidu) like a bride", we read about Gilgamesh (Tablet VIII 2, 17). The face and head are bound up and the body is laid in the coffin. The wailing priest (*kalû*) is summoned and directs the death plaint. The bereaved survivors express their grief by removing their headgear, breaking their ornaments, rending their clothes and putting on mourning (*šakûn*), tearing out the hair of their head and beard, throwing themselves on the ground and gashing their bodies with knives. Sacrifices of oxen and goats are made, according to the means available, accompanied by libations in connection with the death plaint. In the Gilgamesh Epic (the Meissner fragment: II 6; see above p. 679¹) Gilgamesh laments for seven days and nights, but this must be understood as a sign of the inconceivable grief which has overwhelmed the hero of the poem upon Enkidu's death. In the tropical climate of the Mesopotamian land three days must be regarded as the longest interval between death and burial. Herodotus's statement (I 198) that the bodies were conserved in honey has not been confirmed by the texts, but in Ashurbanipal's annals we hear of the use of salt¹ for this purpose.

The interment (*kibîru*) took place according to the usual Assyro-Babylonian custom, and was essential if the dead person were to find rest, as shown by the Gilgamesh Epic, Tablet XII 151-54. It is true that in different parts of Mesopotamia (Shurgul, Adab, Babylon, Assur, Ur) there have at different times been found remains of the bones of burnt bodies, which would seem to indicate cremation, but so far only contradictory explanations of these finds have suggested themselves (the bodies may have been foreign immigrants?) and at any rate they are in absolute contrast with the common custom of interment.

People of the humbler classes were originally interred naked, later they were wrapped in a cloth. The grave was covered with a rush mat and a square or oval edging of clay bricks surrounded the site. Later we see trough-like clay coffins with or without a lid, and better-class people might allow themselves larger pan-like or urn-like clay coffins, which could be joined together to a double tomb. The shape of the clay coffins and the character of the funeral depended on the

¹ V R 7, 40: AS. MUN = Akk. *ina šabti*.

means of the deceased as well as on their place in the different strata of the necropolis. We have gained much information from the excavations in Ur and from the Babylonian quarter Merkes. Apart from the royal tombs at Ur, the grave furniture was never rich. There are all kinds of clay vessels, goblets, and bowls, but weapons and cylinder seals are rare. On the other hand, the deceased seems to have kept ordinary ornaments such as necklaces of stone beads, eardrops, ornamental pins, bangles, and ankle rings.

As the type of a grave for one person (and perhaps his family) may be mentioned finds from Assur's "copper tombs" (Stratum E), which from the character of the grave furniture may be assigned to the time of the Ur III Dynasty (2123-2016). The resting place for the deceased was produced by digging a vertical shaft from the surface of varying depth; a cavity is then dug in the earth from the floor of the shaft, making room for the deceased and his family, besides clay vessels and other grave furniture. After the interment the cavity was closed with clay bricks and finally the shaft was filled with earth. Over the filled-in shaft a low mound of clay was raised, on which a small furnace was built for the burning of a death fire which was kindled on special occasions, just as a libation of water (*nâḫ mē*) was made. This was a very important ceremony which must constantly be repeated. "In his resting place he is in the shade (i. e. darkness) but drinks pure water", says Enkidu about the departed to Gilgamesh (Tablet XII 148); the clear cool water refreshed the deceased in his grave. The co-operation of the priesthood was necessary at the funeral rites and procured them a good income, while the expenses might be a heavy burden to the less affluent.

All the dead of a town were collected in the large urban burial places. Great finds have been made during the excavations in Kutha, Nippur, Babylon, and Ur, but mass interments in a certain area did not prevent families or single persons from having their own delimited plots and sites. Perhaps the burial places outside the city area proper were always chosen with forethought as in Babylon, where the situation in the southwest was probably selected because Babylonia's prevailing wind is the north-west wind, so that the city of the living was not usually affected by the exhalations from the city of the dead.

Inhumation was the commonest form of burial but in the first times of cities it took the shape of burial in the grounds of one's own house.

In the earliest ages all were buried in their houses; such was the custom among the Sumerians (cp. e. g. the sepultures in the houses of the Larsa period at Ur), and in Assyria this custom long survived. Thus from the Assur of the 13th century we know a house in which there was a vaulted sepulchral chamber with a small shaft for descent in front, which contained a double burial (two clay coffins with lids) on the site of the house and under its foundation. This is of course an example of a wealthy man's manner of burial, humbler people took up the floor in some place in the little house and there dug a grave for their dead. Whether the state afterwards issued a decree that all were to be buried in the common necropolis outside the city wall we do not know with certainty, but gradually as the cities grew it was realised that such a measure was necessary.

The life of city governors and kings was different from that of the populace, hence their death and burial was bound to be different. Everything was on a larger scale but the general character was the same for king and citizens. Three days' universal mourning was the rule upon the death of a king; the coffin was a sarcophagus of costly stone or of mountain limestone, the entrance to the mausoleum was closed with bronze doors or wooden doors mounted with bronze. The Kassite kings (1740(1430)–1165) were buried in the palace and thus reverted to the ancient burial custom of being laid to rest in their own house. Gudea caused a mausoleum of cedar to be erected within the temple barely 400 years earlier; the Babylonian kings had their mausoleum on the south-western outskirts of Babylon and near the large common necropolis of the citizens. Thus we have three different possibilities for royal burial places; the mausoleum in the city temple was the rarest form.

At Ur the oldest burial place was situated outside the walls of the old city; it contains two kinds of graves, those of the citizens and deep down the royal mausoleums, 1850 tombs in all, 16 of which were royal. They are the tombs of the rulers of the Ur I Dynasty and their families, and afford us unique insight into what I have called the Shub-ad culture,¹ (2459–2309) through the copious royal grave furniture. The royal tombs were shaft-graves up to 11½ m. deep, the depth of most of them ranged from 6 to 7½ m., and in some of them were the remains of brick-built mausoleums erected in the deep sepulchral chamber under

¹) *Chronology of the Shub-ad Culture* (1941), *passim*.

the ground to which the vertical shaft was sunk. The size of the sepulchral chambers varied, the largest were $12\frac{1}{2} \times 5$ m.

The dimensions are larger than those otherwise known in Mesopotamia, but the general character is the same as that of the Assyrian one-man graves mentioned above: a shaft, and at the bottom of this a dug-out sepulchral chamber. But new and astonishing was the character of the burial ceremonies, the excavator Sir Leonard Woolley having established beyond doubt from the finds that the dead king (or queen) was accompanied in death by members of the household personnel who were buried alive with carriages, draught animals, weapons, and treasures in the deep sepulchral chamber in company with the departed ruler. This burial custom, so unusual within Mesopotamian culture, even where royal interments are in question, has given rise to some untenable theories, partly that the interred kings were immigrated chiefs of foreign peoples (S. Reinach)¹, partly that the shaft tombs were not burial places but underground cult places where parts of a fertility ritual were performed (Sidney Smith,² Fr. M. Th. Böhl,³ S. Lloyd⁴). I also consider it unwarrantable to speak of human sacrifice (Fr. Hrozný⁵); we must be content to note that in the Sumerian Ur I Dynasty the dead ruler went to his eternal rest accompanied by the personnel of his royal household, and that the interment of a ruler took place in a similar way at another time and in other places in the world, e. g., according to Herodotus IV 71, among the Sarmatic Scythian kings, though we cannot for that reason ethnically or culturally connect them with the Sumerians.

§ 13. The person who had not been buried according to the custom of the country became an *efimmu*, an evil demon, who joined the band of the thousands that threatened the welfare and health of mankind. In theological systematics the *efimmu* was given a definite field of activity, diseases attacking the middle of the body, just as another demon, *utukku*, who was also originally connected with the dead, attacked the back of the neck. A person who had been legitimately laid to rest in his grave received libations of water there and a fire was kindled

¹ *RArch.* 5 sér., t. XXVIII (1928).

² *JRAS* 1928.

³ *ZA* N. F. V (1930).

⁴ *Mesopotamia* . . . (1936), p. 156.

⁵ *Die älteste Geschichte Vorderasiens und Indiens* (1943), pp. 78 f.

in the furnace on the grave on certain occasions to keep away the baneful demons. The survivors remembered the deceased—for a time. The dead person himself turned to dust in the grave. "Tell me", Gilgamesh asks Enkidu, whom in the story of the epic he has finally conjured up, "tell me what is "the law of the earth" (*ur-tim iršitim*) which thou hast seen" (Tablet XII 87-88). Enkidu refuses to tell him, his friend would begin to weep if he were informed, but Gilgamesh seems to answer that he prefers that, if only he may learn everything. And the reply then is: "Well then, the body that thou didst touch till thy heart rejoiced is devoured by the earth as if it were an old garment. My body which thou didst touch till thy heart delighted has dwindled, is full of dust, into dust it has sunk" (Tablet XII 92 ff).¹ Such is the law of the grave; the interred, be he king, chief priest or poor man, will turn to dust.

From the reality of the large urban necropolises grew the later theological idea of an underworld. The dead must be imagined to descend into it from their graves; it has many names. In the literature we encounter the term *kur-nu-gi-a* "the land from which there is no return" (Akk. *iršit lá târi*); *bīt Tammuzi* in reference to the god Tammuz' ritual death in the vegetation cult; proper names such as *Arâlu*, *Irkallu* and *Kutû* were also used. The theologians also provided gods to rule the underworld: Eresh-ki-gal, (Akk. *Al-la-tum*), is its queen, Nin-azu, later Nergal, is her divine consort.

Evil dreams are omens of Enkidu's sudden death. In these he visited the underworld and saw that chief priests as well as their non-official helpers dwelt there. Great and small, all assemble there. In order to get there he took "the road that does not return, into the house, the inmates of which must do without light, where the dust of the earth is their nourishment, clay their food, like birds in winged plumage, they do not see the light, they dwell in darkness (Tablet VII 4, 35-39)". In the epic on Ishtar's Descent into the Underworld to free her lover, the god Tammuz from the fetters of death we meet with a description of the world of the dead almost identical with this,² only with the addition "on the doors and locks dust accumulated".³ Thus the idea of the world of the dead was firmly established but with this also the certainty that sooner or later the dead became one with the dust by which they were surrounded on all sides.

¹ The text is in a bad condition and my translation therefore a very free one.

² CT XV (1902), 45: Obv. 5-10.

³ *Ibid.* Obv. 11.

CHAPTER XIII

SACRIFICES AND FESTIVALS

§ 1. The world in which the Babylonian lived was a cosmos, a well-ordered and well contrived world, which the gods had once in primeval ages created in the best possible manner after a preceding struggle with and victory over the demons of the waters. The priesthood's ritual recital of the primeval events at the great annual festival was a pledge to men that the world was a cosmos, but they also knew that the insecurity of life, hostile invasions, the intolerable rising of the waters and the constant attacks of demons on mankind required an unremitting watchfulness on the part of the state as well as the individual, and that the primeval creation must be repeated every year if the sun were not to be extinguished and the waters rise above the house-roofs.

We know the primeval events from seven tablets inscribed with the epic *Enuma elish*. "Time was, when on high" (the first words), the story of which is based on the ritual recital of the priests, which served as a liturgical text at the New Year's Festival. We follow Marduk, who since the time of Hammurabi was the official supreme god of the country, in his victorious fight with the primeval waters (Apsu, Mummu, Kingu, and especially Tiāmat) which the other gods have in vain tried to subdue (of which later). In a council of the deities (*puḫur ilāni*) Marduk is elected to be the avenger of the gods and the supreme royal power (*šarrūtu*) is bestowed on him at the same time as his "destiny" (*šimtu*): "Thy destiny O Lord surpasseth that of the gods, command destruction and creation and it shall come to pass".¹

Marduk prepares for the fight armed with a bow, quiver, arrow, and javelin as well as a net; furthermore, "he lets his eyes flash (?) like lightning and fills his body with a burning flame",² creates four winds,

¹ *Enuma elish* IV 21-22. Cf. above p. 680².

² *Enuma elish* IV 39-40.

a sevenwind, and mounts his chariot which is drawn by a team of four. Marduk spreads out his net which enmeshes Tiāmat, and lets the hurricane winds loose. When Tiāmat opens her jaws to swallow him the hurricane sweeps into her inside and the pressure prevents her from closing her mouth for the destruction of Marduk and his team. Marduk's *mulmullu* shatters her stomach, pierces her inside, splits her heart.¹ The victory has been won, finally Kingu is defeated, Marduk takes the "tablets of destiny" (*lup šimāti*) from him. Then Marduk creates a cosmos, he cleaves Tiāmat into two and sets up one half as a shield against the heavens, "bolted it, set watchmen there and ordered them not to let the water flow down".² Then he strides through the heavens, and arranges the heavenly abodes of the gods, fixes the constellations: "(thus) he gave the signs of the year, drew the constellations",³ establishes the place of Jupiter (*ilu Ni-bi-ri*), creates the moon as lord of the night and the measurer of time. On Tablet VI we are told how men are made of blood and bone; they are to inhabit the earth, and Marduk organises the "worship of the gods". In another, Sumerian and Akkadian, text of the creation, EN₂.E₂.KUG.GA,⁴ where Marduk is likewise the creative god, we hear of man being created and then the beasts of the field and the other living creatures, the Euphrates and the Tigris, all green growths, the continents, the wild animals, and the forests.

Thus in the Epic of the Creation the Babylonian has given expression to the agriculturist's annually returning experience, his longing in the hot alluvial land for the blessed rain, which alone can render possible a cosmos with fertility and abundance, insolubly coupled with the certainty that if the rising of the waters is not checked in time he and his cosmos are doomed. This experience is raised to the primeval plane of cosmogony, because by this means the Babylonian alleges that, though man can annually help with all his might, it is the gods, above all Marduk, who once in the past laid the foundation of all life through struggle and victory. For Marduk's victory over Tiāmat and her gang is identical with the production of a cosmos, the creation is a necessary consequence of the victory over the waters, not a voluntary act of grace

¹ *Ibid.* IV 93-102.

² *Ibid.* IV 137-40.

³ *Ibid.* V 3.

⁴ 82-5-22, 1048; first publ. by Th. G. Pinches, *JRAS* 1891, pp. 393-408, re-ed. in *CT XIII* (1901) 35-38.

on the part of Marduk in his joy at the downfall of the monsters. This is the profound meaning of the word "destiny", the phrase "to determine the destinies" (*šīnu šīmāli*); it means that by the taming of the waters the cosmos has been created with a fertile year and a peaceful human life in an ordered world.

The victorious fight is followed by the ritual wedding of Marduk and Šarpanitum, but both the acts are merely two aspects of the same thing, the creation of the cosmos. In one of his inscriptions Gudea¹ tells us that at dawn he enters the temple after Ningirsu, the mighty city god of Lagash, who makes his entry like a whirlwind. Like the sun when it rises on Lagash, his wife, the goddess Ba-ba₆, goes to meet him, and like a faithful wife she approaches his couch. "And like the Tigris when the waters are high, she remains at his ear, the queen, the daughter of the pure vault of heaven. Like the sun, like the one who "determines destiny" (*Sum. nam-tar-ra-am₂*) Ba-ba₆ mounted his couch; to Lagash she gave fertility. Day began to dawn, the sun of Lagash rose on the lands".² The holy marriage of god and goddess is the prototypical act which creates the fertility of all life keeps the sun in its orbit, so that each morning it rises again in the east and scares away the dark. It is as a result of the marriage union that day dawns and the sun rises on the lands and that rich fields presaging full storehouses are secured to the city-state of Lagash, that the vegetation grows green, that women give birth, that cattle and wild animals drop their young, that birds brood. As Ba-ba₆ enters the bridal bed she (and he) "determine destiny", i. e. create the year, now beginning, with its fruitfulness and peace.

Every year the god repeats his struggle with the demons of the waters and is united with the goddess in the holy matrimonial act. Every small city area originally had its annual local festival where the victory and marriage was celebrated by the governors of the cities; god and goddess—the names of these vary from place to place. The annually returning festival is necessary for the community if it is not to look forward to dissolution and deluge, the experience of centuries has shown it. But in the times when the city and the rural districts were united under a central government, the annual festival was celebrated in the capital. After the days of Hammurabi the great *akītu* festival (*Sum.*

¹ Cyl. B 4, 23-5, 12 (SAK, p. 124, 126).

² *Ibid.* 5, 13-19. (SAK, p. 126).

zag-mug) took place in Babylon and the officiating god was Marduk; in Assyria it was the state god Ashur.

The Sumerian *patesi* (Chapter IX) was the deputy of the city god; Naram-Sin of Agade and the kings of the Sumerian Ur III Dynasty were deified to signify that the royal power had taken possession of a central kingdom and was trying to centralise the religious cult. From the days of Hammurabi the state was separated from the cult, the king and Marduk (in Assyria: Ashur) were sovereign rulers each in his own domain. But at the annual festival their courses converged, and during the holy days of the festival the king and Marduk were identified. The supreme importance of the king for the country whose administrator, cultivator, highest judge, and protector in war he was in daily life, acquired a deep significance in the festival days when, identified with Marduk, he fought the demons of the waters, vanquished them, and then celebrated the holy wedding.

The battle of the gods and the marriage were enacted as a regular drama at the *akitu* festival which from the time of Hammurabi was celebrated in the month of Nisannu, i. e. around the vernal equinox; in the middle Sumerian period (Sargon of Agade, Gudea) at the autumnal equinox, since the year began in the month Tashritu at that time. From Ammi-zaduga (1646-1626) to Cambyses (537) we have textual evidence of the celebration of the feast in Babylon, Assur, Nineveh, and Uruk, in earlier times at Nippur, Ur, and Uruk. It was a calamity when the festival could not be celebrated owing to war. Nabonidus, the last king of Babylon (555-538), notes in his annals that it was impossible to celebrate the *akitu* festival in the 7th, 9th, 10th, and 11th years of his reign, because of the insecurity caused by hostile invasions. The new lords of Babylon, the Persians, celebrated the annual festival like true Babylonians when peace had been restored in the country.

The *akitu* festival¹ was celebrated from the 2nd to the 12th of Nisannu. From the 2nd to the 4th of Nisannu Esagila, Marduk's temple in Babylon, was purified and a series of sacrifices took place; on the 5th of Nisannu gods from other, adjacent, large cities, Nabû from Borsippa, Nergal from Kutha, Ninurta from Kish, came to witness Marduk's fight and victory, his main festival, a manifestation both of political and religious centralisation. Only later, on the 8th of Nisannu, did the old Sumerian gods appear, Anu from Uruk, and Enlil from

¹ For further details, see S. Pallis, *The Babylonian Akitu Festival* (1926).

Nippur, and all assembled in the sacred chamber of Esagila which was called the "chapel of destiny" (*parak šimāti*, Sum. *ub-šu-ukkin-na*), where Marduk had been elected by the gods to be their champion. On the 10th of Nisannu Marduk's great procession took place: it progressed down the holy procession street, Aiburshabu, through the Ishtar gate to the *akītu* temple outside the inner city wall. Before the procession started, but on the 10th of Nisannu, "the hand ceremony" took place in the temple, the king "taking Marduk's hand" (*kāt* ¹*Marduk iṣabbat*) with the observance of a particular ceremonial and religious formalities. This did not mean that the king was invested with his royal dignity by the god, received his investiture every year or the like, but on the contrary, that by his hand-shake Marduk bestowed all his "Marduk power" on the king, changed the king into Marduk, so that he, identified with Marduk, could act ritually in the coming drama of the fight against the freshwater demon Tiāmat, so destructive to fertility.

The battle resulting in victory took place in the *akītu* temple outside the town on the 10th of Nisannu. The king must have carried out the act dramatically; we have a text giving an account of Sennacherib¹ who is depicted fighting against Tiāmat and her children. The representation is taken from the cult in which Sennacherib is identified with Ashur in the great culminating moments of the festival. On the 11th of Nisannu Marduk returns in a victorious procession to Esagila by the same way and ascends into the upper part of the great temple tower Etemenanki, where in "the bed house" (*e-na*) the king and one of the chosen "god-brides" (*enāti*, see p. 682) celebrate the holy marriage, identified with Marduk and Šarpanitum (Zêr-Bānitum). On this day and on the 12th of Nisannu great sacrifices are offered up, and on the last day of the feast the alien gods again leave Babylon.

These were the original broad features of the annual festival. New features and other ceremonies were added in the course of time, which fact in connection with gaps in the tradition may well serve to bewilder the enquirer at a first glance; on a closer scrutiny he gains more insight. On the 11th of Nisannu another council of the gods took place in *parak šimāti*, when the "destiny" was determined and inscribed on "tablets of destiny" (*ṭup šimāti*). This is a later notion; inspired by the royal decrees, committed to writing, and published by proclamation,

¹ K. 1356, published by S. Palls, *The Babylonian Akītu Festival* (1926), Plates III-IV.

it was thought that the gods, especially Marduk, noted down the lucky days and future success, the prosperity and fertility of the land, on clay tablets; the idea probably gained ground in Hammurabi's Age when the Creation Epic mentions such "tablets of destiny" (p. 689). Primarily of course, in Babylonian parlance, the "destiny" of the nation was decided by Marduk's victory and marriage union.

Another secondary feature was Marduk's death and burial which must probably be assigned to the 6th-7th of Nisannu. From a badly preserved and often not very intelligible text it would seem that Marduk was kept captive, imprisoned, as it were, in "the mountain"; the city rises in revolt, fighting follows. Marduk is remote from the sun and the light, has disappeared from life, his wife looks for him at "the door of the tomb". If we remember the preceding descriptions of the realm of the dead in the underworld, we have no doubt that Marduk is dead. The idea of the dying god is familiar to us from Egypt and Asia Minor; it is the anthropomorphic expression of the annual rhythm of the vegetation, the experience of thousands of years that summer and growth is succeeded by winter and the empty field. Among the Sumerians too we know this type of god; here we need only mention Dumu-zi (Akk. Tammuz), to whom we referred above, and whom Ishtar brought back to life again by her descent into the underworld. The actual cultic burial rites presumably took place in Etemenanki's *giguná*, the lower part of the temple tower, which was built as an imitation of the realm of death.

One more fact must be emphasised. The chief cult acts were only attended by the king and the highest religious officials of the kingdom. This applies to the king's identification with Marduk ("the hand ceremony"), his fight and bridal bed, but all the Babylonians knew the drama of the festival. Along the procession street a wave of movement passed over the innumerable heads of the crowd as the Marduk procession proceeded on its way past it. But the Marduk seen by the people was the real Marduk, the huge idol from the principal temple, Esagila, which is carried in procession to the *akitu* temple, where Marduk was to ensure the fertility and prosperity of the New Year by vanquishing the water demon Tiamat. And it was this same Marduk to whom the people paid homage with endless cheers when on the 11th of Nisannu he returned by the same way to Esagila.

§ 2. Such are the main features of Assyro-Babylonian religion. If we go into more detail it is rather a complicated affair, which is due amongst other things to the fact that in the course of the long history of ancient Mesopotamia the Sumerians and two or three Semitic peoples had become more or less fused, and the same applies to their religious notions. The retention of the Sumerian language as the medium of expression in religion right down to the Persian time, and a different nomenclature in that language, does not facilitate the work of the enquirer. And only on a very few points are we able to segregate religious elements as specifically Semitic, i. e. Assyro-Babylonian. Perhaps the goddess Ishtar, the etymology of whose name and the conception of whose nature are known from western and southern Semitic peoples, is one of the distinctive elements of Semitic religion, but on the other hand it must be remembered that one of her functions, as protector and producer of fertility, is commonly attributed to all female deities all over the face of the earth. After the Semites had seized the sovereignty in Babylonia Ishtar ousted all the old Sumerian goddesses, and even though a few of their names survive as epithets of Ishtar it can be said with full justice that apart from the colourless consorts of the great gods who are merely females, she is the only living goddess in Babylonian and particularly in Assyrian religion. Her love lust is depicted in vigorous terms in Tablet VI of the Gilgamesh Epic.

As another Semitic feature may be mentioned the inclusion of the movements of the stars as a means of interpreting the phenomena of human life. Above we mentioned the description in *Enuma elish*, Tablet V, of how Marduk established the alternation of the seasons, the way of the moon in the heavens, and preceding this comes the following passage: "He created standing places (*man-za-za*) for the great gods, set up *lu-ma-ši*, (the signs of the zodiac or the star of Jupiter?), the stars which were their (i. e. the gods') images (*tam-šil-šu-[nu]*)"¹. Here, for the first time, so far as I know, it is said that the stars are the images of the gods. Already in Sumerian times the sun, the moon, and the large bright planet of Venus occupied an important place among the religious ideas as the maintainers of fertility and the indicators of time, and their courses in the sky were used for important datings in the festival calendar of the farmer. Subsequently the idea arose that other planets too were images of the gods, and their position as well as

¹ *Enuma elish* V 1-2.

that of the fixed stars began to be observed so that knowledge of the will of the gods might be obtained through them. And gradually a system developed, spreading more and more through the belief in omens and their interpretation, the main idea of which was that there was a correlation between the heavenly and the earthly phenomena, and that it was possible for the initiate to read the future in the signs of heaven. As a complete firmly coherent system we cannot assume it to have been developed until the first half of the 8th century simultaneously with the development of Babylonian astronomy. But, as we have seen, the identification of the heavenly bodies with the well-known gods had already begun much earlier; theological speculation steps in as an intermediary and its constructions are often odd and forced; each of the great gods was identified with a star, Anu with the polar star, Marduk with Jupiter, Ea with Fomalhaut, Ninurta with Saturn, Nergal with Mars, Ishtar with Venus, etc. Further, certain gods were identified with the various seasonal stages of the sun's course, Marduk was the spring sun hailed by all with delight, Ninurta was the summer sun with its scorching heat, Nergal the winter sun; and these ideas were expressed in myths, in which the annual rhythm of the vegetation, its dying in the winter, and revival at spring time, coincides with the sun's differing altitude over the landscape as it affects the changes in the vegetation. The system was further elaborated so that Ishtar of Agade, for instance, was identified with Venus as the morning star, while Ishtar of Uruk was the planet as evening star.

§ 3. Marduk's unique position in the Babylonian pantheon (similar to that of Ashur in Assyria) was due solely to the idea of centralisation. He was the old local god of the new capital and hence gathered up all in his person, as demonstrated in the cult by the fact that he is the principal character in the battle and marriage drama when the Age of Hammurabi officially adopted the new state religion. But it also follows that before that time each city community had its own gods and celebrated a local *akitu* festival. Gods and goddesses, bearing names and often represented by statues, but always anthropomorphic, never identified with the natural phenomena they are thought to direct or watch over, come crowding in couples from all the ancient city communities of Mesopotamia. The large states which we know from the time before the First Babylonian Dynasty must also have intervened with their

political and religious organisations, but we are unable to draw a fully valid picture of the evolution up to Marduk's supremacy, we can only point out a few details.

Thus some texts describe the fighting and creative activity of the gods Anu (Uruk), Ninurta (Kish), Ea (Eridu), Enlil (Nippur), and Anshar in the primeval ages; it is natural to see in this reminiscences partly from the local performance of the cult, partly from periods when various city-states such as Uruk, Ur, Agade, Kish, and others exercised supremacy over large territories. Further, two points should be kept in mind. In Chapter IX we discussed Lugal-zaggisi's establishment of Nippur as a kind of central shrine in his newly created unified Sumerian kingdom, and in our further account we pointed out that posterity, until the Age of Hammurabi, remained faithful to this religious idea. We can see therefore that Enlil of Nippur must be the god on whom Marduk, the local god of Babylon, was modelled. And indeed it is characteristic that Marduk's second name Bêlu, "the lord", is a term in common to Marduk and Enlil, and to these two only. Lugal-zaggisi's second, less far-seeing, religious contribution, that of making An (Akk. Ann), the heaven god of Uruk, the supreme god of the Sumerian pantheon, was short-lived and has only left its mark in certain accounts of the creation and in the theological triad Anu, Enlil, and Ea, after the time of Rim-Sin of Larsa (1822-1762).

The last of these three was the local god of Eridu, the southernmost town of Sumer by the Persian Gulf, and probably the sacred city of the Sumerians before Nippur became a kind of central shrine; its enormous ziggurat, the base of which shows it to be the largest in Mesopotamia, affords conclusive evidence of this. And further, Ea's position throughout history remains unique; he is man's friend among the gods, lord of the powerful conjuration rites together with the later supreme god Marduk, Shamash (the sun god), and Ishtar, and finally the fighter and creator in primeval times. And theology made the mighty Marduk of Babylon his eldest son. We cannot here discuss in more detail all the problems arising out of the deliberate assimilation of the new ruling god of Babylon and the Eridu religion represented by Ea, but it is hardly advisable to draw the conclusion that Marduk originally came from Eridu. From the time of Gudea we know Marduk's Sumerian name Asar-ri, whereas his common Sumerian epithet in later times, Amar-utu "son of the sun", is hardly of ancient date.

Marduk and Ashur retained their divine supremacy till the dissolution and downfall of the kingdoms, but we can ascertain periods in which they were thrown into the background in favour of other gods. Thus it is worth noticing that Ea comes much more into the forefront than Marduk under the foreign Kassite rule, the Third Babylonian Dynasty (1740(1430)–1165); we see the foreign rulers' conscious dissociation from the supreme god of the vanquished. On the other hand, we do not know why Adad-nirâri III of Assyria (805–782) prefers Nabû of Borsippa to Ashur, nor why in Nabonidus' reign, which was to terminate the glorious history of the Babylonian kingdom, Ur's old deity Sin (Sum. En-zu; ZU.EN) occupies a dominant position which quite overshadows that of Marduk. When we learn from late Babylonian texts that the conqueror Cyrus' son Cambyses celebrated Marduk's *akîtu* festival like a true Babylonian, it is perhaps a sly hit at Nabonidus who was born at Uarran, whose ancient divinity was Sin.

The relation of the gods to men appears very clearly from the character of the Babylonian religion. They have created the world, ordered it as a cosmos, created man, and through Ea taught him all about the cultivation of the soil, the making of implements, writing, the building of temples, etc. And each year the creation is repeated, the state god Marduk fighting, conquering, and creating as in primeval ages, so that the cosmos of the gods may forever be protected and maintained.

§ 4. Man's relation to the gods can be defined with equal clarity, only we must distinguish between the state which acts both on its own behalf and that of the citizens, and the inhabitants of the country, the Babylonians. Hence we can speak of a state cult and a private cult, and must not be led astray by the fact that part of the ritual of the private cult was performed in buildings erected and administered by the state, the temples. Further the king must be kept outside; his double capacity, as deified or as the symbol of the state power and its only legitimate wielder, but in both cases identified with Marduk in the *akîtu* festival, has been mentioned in the preceding part.

The state cult is manifested in sacrifices and feasts, directed by the priesthood, a large class of officials divided according to rank, and living in or around the large building complexes of the temples. The sacrifices (*nikê*; *zîbê*) may be divided into two groups, the daily regular ones which it was the king's duty to supply on behalf of the population

but to which the private offerings of the people were also added, as well as the regular weekly, monthly, and annual feast offerings. The second group comprised sacrifices which were offered on special occasions of significance for the welfare and prosperity of the state (wars, years of scarcity). On the cylinder seals found by thousands and on the more monumental representations we often see both groups of sacrifices depicted. Of the ample quantities of the daily sacrifices we gain an impression when we learn that Rimush (2248–2239), the second king of the powerful Agade Dynasty, fixed as the portion to be supplied daily to the sun-god Shamash at Sippar: 20 sheep, 4 oxen, 6 *gur* of corn, 3 *gur* of flour, and likewise the same measure of dates, oil, lard, milk, and honey. The sacrifices to Marduk fixed by Hammurabi and much later by Nebuchadnezzar do not by far equal the large sacrificial gifts of Rimush, but from the statements of the Anu temple at Uruk from late Babylonian times we see that the daily supplies offered were also great in the late periods: 50 different kinds of sheep, 2 oxen, 1 milk cow, 8 lambs, 30 *marratu*-birds, 30 turtle doves(?), 3 fowls, 7 ducks, 4 boars, in addition to 6 eggs. On the great feast days the number of the animals that went to the temple precincts was very great, thus a list, perhaps from Enlil's shrine at Nippur, gives the names of purveyors of 3569 animals for a single feast. Nebuchadnezzar does not give the amount of his supplies to the *akîtu* festival, but his impressive list runs as follows: "I brought gold, silver, precious stones, apparel (? *zabšu*) of many colours, the riches of the mountains and sea, the best of everything beautiful, full-grown fat bulls, clean sacrificial beasts, young sheep, kids, an abundance of freshwater fishes, the birds of the sky, fowls, cocks (?), *marratu*-birds, pigeons (?), onions, musk, the pride of the swampy meadows, luxuriant greens, the ornament of the garden beds, golden glorious fruit, the splendour of the orchards, dates, prickly pears from Dilmun, white figs, white wine, mild thin ale, honey, butter, sweet cream, milk, the finest oil, oil for anointment, all in superabundance, the profusion of remote regions, the best from all countries, countless libations of spiced wine (?) as if it were water, grape wine – this I offered every year in great quantity and abundance".¹

The sacrifices were offered on special altars and on the roofs of the temples. They were either slaughtered or burnt offerings, in connection with libations and incense offerings. A very numerous priesthood was

¹ Wādi Brissah Inscr. B VII 12–31 (F. H. Weissbach, WDOG V (1906)).

required for the performance of the daily as well as the periodically recurring ceremonies at the sacrifices. *Šangû* was the priest officiating at the sacrifices, his highest superior was termed *šangammaḥḫu*; the relation between the latter and *urigallu*, who must be regarded as the "high-priest", was presumably this: the latter was the chief director of the temple and all cult acts, while *šangammaḥḫu* was the highest sacrificing priest. A whole college of *ērib bīti* of different ranks directed the daily ritual, while *kalû*, *nāru*, *zammuru* denote classes of priests who were charged with the vocal part of the ceremonies (recital of hymns addressed to the individual gods, the singing of liturgical prayers, ritual laments). Libations were made by the class of priests called *nišakku* who were nude during the performance of this duty; the ritual ablutions and anointings were directed by *ramku* and *pāšišu*. Before the festivals began the temples were purified by the exorcising groups of priests called *mašmaššu*, which is the Sumericised term for the *ášipu* priest who, as "exorcist", together with *bārû* "the seer", the director of the omen ritual, are the only two classes of priests with whom the civil population comes into contact through the exorcising ritual and the interpretation of the omens. A large female temple personnel was employed in the state cult, in addition to those who assisted at the fertility ceremonies of the great festivals, and who lived together in the *gagû* buildings, mentioned above. We may for instance mention the female wailers (*zammertu*, *lallartu*) and those who interpreted various kinds of dreams (*šā'illu*).

When a Sumerian city patesi such as Gudea calls himself "Ningirsu's priest", while the Assyrian kings never in their titles forget to call themselves "the god Ashur's priest", such titles do not denote any sacred office, but indicate their participation in the creation and fertility ceremony of the year as well as their supremacy in all internal affairs, including the cult, in their realms. In the latter connection it was the duty of the king to restore and maintain the temples, while in golden and peaceful ages the rulers of the kingdom were anxious to erect new temples in honour of the gods. Almost every one of the numerous royal inscriptions testify to both activities, restoration and building.

§ 5. The temple precincts constituted a very large area, and in the large cities there was not only one, but there were many such complexes, of varying sizes, it is true, but to make up for it, the shrines to the su-

preme god in Babylon and in Assur were superior to all others by their size and magnificent equipment. As a general characterisation of these temple blocks it may be said that they were divided into two areas, both of them surrounded by high walls which enclosed in a square partly the temple itself, partly the ziggurat (*ziġkurratu*, *siġkurratu*, *siggurratu*), the temple tower, which was built in storeys (*rikbu*). In large courts (*kisallu*) in front of the temple the population could assemble at the great festivals while access to the widely branched interior of the temple itself was reserved to the priesthood, the king, and the select representatives of the administration of the country. The temple chambers were numerous, it would seem that the terms *papaĥu* and *parakku* denoted larger and smaller sacred chambers about which also the word *bĥtu*, literally "house" was used. The image of the god was placed in such a chamber. Another important holy place was the *parak šĥmĥti* (Sum. *ub-šu-ukkin-na*), where "destiny is determined".

At the top or "head" (*rĥšu*) of the ziggurat "a high temple" (*kiĥĥu ellu*) was built which contained various chambers, amongst others "the bed house" (*bĥt irĥi*, Sum. *e-na*), where the holy marriage was celebrated (cp. Herodotus I 181), as mentioned above; and its lower part contained a burial chamber (*giĥunĥ*), a term we know from as far back as Gudea's time, a fact which we think lends support to our conjecture that all temple towers had a sacred place of this character.

Within the precincts of the temple there were buildings where the priests lived, and which housed the instruments of the cult (sacrificial implements of every kind, festive apparel, procession chariots, processions ships, musical instruments etc.); the special building of the female personnel has previously been mentioned. Finally two important temple buildings in the large grounds may be noted: *bĥt rimki*, where the expiation and purification ritual, performed in connection with ritual ablutions under the direction of the exorcising priests, took place, and *bĥt aĥtammi* (p. 682). Finally, outside the precincts of the temple complex, in Babylon and Assur even outside the town itself, was the *bĥt akĥtu*.

After this general description of a Mesopotamian temple complex we now turn to the central shrine of the capital, consisting of the Marduk temple Esagila, "the house that rears its head", and the ziggurat Etemenanki, "the house that is the foundation of heaven and earth". Esagila is known as far back as the First Babylonian Dynasty (Zabum, Ammi-zaduga); the temple tower which must be of the same age, is

not mentioned in the sources until the 7th century, after Sennacherib in 689 had pulled down and entirely demolished both. They were rebuilt by the Assyrians Esarhaddon and Ashurbanipal, the rulers of the Neo-Babylonian Dynasty, Nabopolassar, and particularly Nebuchadnezzar. Koldewey's excavation of Esagila¹ was rendered difficult by the fact that the ruins of Esagila were deeply buried in the colossal mound 'Amrân so that the work was left unfinished. Nevertheless we can gain an impression of Marduk's principal temple and can establish the following result: it was situated in an enormous courtyard, surrounded by a square wall about 330 m long; the Esagila temple itself, with "the so-called *nuḫar*" E₂.U₆.NIR, was 78 × 86 m, the height is estimated at 30 m. The temple had 2 (3) inner courts, and 6 gates opened from the immense space into the interior of the temple, the largest of the inner courts measuring 37.5 × 31.2 m.

In a topographical text concerning Babylon, the so-called Smith Tablet,² written in the reign of Seleukos II in the year 229, we gain some idea of the interior of Esagila, which is divided into the eastern, northern, and western houses. The excavations have shown that the chambers in these sections of the temple were of large dimensions, and the text confirms the impression, but unfortunately we are devoid of knowledge concerning numerous particulars of localisation and size in the case of the chapels frequently mentioned in other texts. Marduk's Holy of Holies, *e-ku-a*, where the statue of the god, i. e. the god himself, lived, and *e-zi-da* the chapel which Nabû from the neighbouring town of Borsippa inhabited during the *akītu* festival, were in the east wing; Nebuchadnezzar says: "*e-ku-a*, the *papaḫū* of the lord of the gods Marduk . . . covering its wall with sparkling gold, I caused to shine like the sun."³ The floor was covered with alabaster, the ceiling consisted of huge beams of cedar, which were faced with gold and precious stones, bronze doors separated the sacred chambers, the size of which we do not know.

In the north wing Ea, Marduk's father, had his *papaḫū*, in the south wing Ann, the old supreme god, had a sacred chamber 35 × 35 m.

¹ *Das wieder erstehende Babylon . . .* (1913), pp. 200 ff.

² Cf. V. Scheil, *Mém. d. l'Ac. des Inscr.* XXXIX (1914); R. Koldewey, *MDOG* LIX (1918); and F. Thureau-Dangin, *TCL* VI (1922), Pls. 59–60. As to the history of the tablet, which was found by George Smith, who published an English translation in 1876, see my *The Babylonian akītu Festival* (1926), pp. 83 f.

³ V R 34, I 48–52.

But larger still were the two "houses" in the west wing, *bīt irši*, "the bed house" where Marduk slept, $62\frac{1}{2} \times 15$ m, and *bīt simmilli* (?) "the stair or corridor chamber" which measured $50 \times 17\frac{1}{2}$ m, of the relation of which to Marduk's daily or special worship we know nothing. The great size of the "bed house" (Galerie des Glaces, Versailles is 73×10.40 m) is due to the fact that this chamber was also Esagila's treasury. Of two of Esagila's sacred chambers we have no topographical knowledge, they are the *ub-šu-ukkin-na*, where "destiny is determined" during the *akitu* festival, and *ubsaharra*(?), where Marduk's image is temporarily placed during the great feasts.

Nabopolassar laid the foundation for the rebuilding of Etemenanki after Sennacherib's ravages, and he tells us that he built it as an imitation of E₂-babbar-ra, the temple ziggurat of Shamash at Sippar, but it was Nebuchadnezzar who completed the work and also erected the "high temple" on its "head". The technical name for this shrine was *šahūru*, which denotes the most private chamber of the palace or temple, so that a translation as "the wedding house"¹ agrees with my hypothesis of 1926² that the holy marriage of the *akitu* festival was enacted as a cult drama in the "high temple" of Etemenanki. Nebuchadnezzar says: "All the peoples of the numerous nations . . . which Marduk, my Lord, had given into my keeping I forced to act as workmen . . . at the building of Etemenanki."³ We realise that these words are true when we have gained an impression of the dimensions of the building.

Nothing but the foundations was left of Etemenanki when the Babylonian mound Saklu was excavated; the remains of walls and staircases in connection with a close study of the texts enable us to draw a diagram of the external dimensions of the temple tower. Like Esagila it was situated in an immense court whose enclosing wall was 412.23 m long; it formed a square as in Esagila. Etemenanki stood in the western part of this large area, opposite it was the "God's gate" which was the entry to the precincts of Etemenanki and to which the longest street of Babylon, the Marduk-Nergal street, ran. On either side of the "God's gate" was a block of temples which taken together were larger than Esagila. I suppose that amongst other things these buildings served

¹ E. Unger, *Babylon . . .* (1931), pp. 196, 376.

² *The Babylonian akitu Festival* (1926), p. 247.

³ H. V. Hilprecht, *Old Babylonian Inscriptions . . .* I (1893), Pls. 34-35; II 24-36.

as living quarters for the widely branched priesthood, the priestesses, and their helpers who were employed in the gigantic temple, and that they further contained *bīt rinki* and *bīt aštammi*.

The base of Etemenanki formed an approximate square and measured 91×91 m, its height being 91.5 m. The temple tower had in all 6 storeys (*rikbu*) above the large substructure which was 33.55 m high. The first story was 18.3 m. The second to the fifth were probably 6.1 m each, the sixth storey, the "wedding house", was 15.25 m high, and the area of its base was 24.4×22.9 m; one of the chambers in it, "the bed house", *e-na*, was 4.5×2 m. A front staircase, 9.3 m broad, was carried up 51.6 m; the remnants of another staircase system at the south-western and the south-eastern corners of the block have been found.

The figures speak for themselves; it must have been a tremendous building, an imposing square of immense height. The texts seem to show that the 15.25 m high temple was covered at the top with bright blue enamelled tiles, the walls and ceilings of the sacred chambers were faced with cedar from Lebanon, of which wood the doors too were made. The huge enclosing wall was likewise faced on the inside with blue enamel, the tower itself was perhaps provided with stucco. As to the numerous attempts at reconstruction which have seen the light since A. H. Layard's¹ (*Birs Nimrūd*) the reader is referred to the statement of Axel Moberg² and O. E. Ravn.³

The first ziggurat known to research was that whose foundations Victor Place uncovered in Khorsabad in 1854, the ancient Dūr-Sharukīn founded by Sargon of Assyria (721–705) for his residence. Since then the assiduous excavations in Mesopotamia have brought to light ziggurats in several cities both from Sumerian times and from the Assyro-Babylonian period of dominion after 1894 B. C. The tabular view below, in which Etemenanki is included, shows that the ziggurat of Babylon surpasses all others. It is true that the base of Eridu's ziggurat was enormous and we understand that this city and its god Ea played a dominant part in the religious history of the whole of Babylonia, but on the other hand, all Sumerian ziggurats were rather low.

¹ *Discoveries in the Ruins of Nineveh and Babylon* ... (1853), p. 497.

² *Babels Torn* (1918; *Lunds Universitets Årsskrift*, N. F. Avd. 1. Bd. 14. Nr. 20).

³ *Herodotus' Description of Babylon* (1942).

City	Name of ziggurat	Base	Height	Period
Eridu		180×100 m		
Nippur	E ₂ -sag-aš	50× 30 m		
Ur	E ₂ -kur-ru-ki-šar ₂ -ra	60× 45 m	c. 21 m	Ur-Nammu
Uruk	E ₂ -gi ₄ -par ₃ -imin	50× 42 m	c. 35 m	Jemdet Nasr
Kish		60× 56 m		Hamurabi
Babylon	E ₂ -temen-an-ki	91× 91 m	91.5 m	Nebuchad- nezzar
Borsippa	E ₂ -ur ₄ -imin-an-ki	60× 55 m		
Assur		62× 62 m	low	Hamurabi
Assur	(Anu-Adad ziggurat)	39× 36 m		
Dûr-Sharrukîn		45× 43 m		
Kalhu		51× 51 m	low	

At right angles to the Marduk-Nergal street, in the direction south-north, ran the procession street, Aiburshabu, skirting the eastern wall of the precincts of Esagila and Etemenanki. Along this street Marduk and the rest of the gods assembled in Esagila drove through the city in chariots on the 10th of Nisannu, bound for *bît akîtu*. On the stretch past the southern palace with the "hanging gardens" Nebuchadnezzar had caused the 20 metre wide procession street to be paved with large limestone tiles 1 metre square and on either side laid smaller blocks of red and white-striped breccia stones (*libitti* ^{abnu} *dur-mi-na-ban-da*).¹ The exit from the town was through the Ishtar gate on which there were large sculptured reliefs of lions, bulls, and the fabulous animal Sirrush partly in coloured enamelled stones (blue and yellow).

We do not know the position of Babylon's *bît akîtu*, but the use of the procession ship *ma₃-ku-a*, revived by Ashurbanipal and later by Nebuchadnezzar who had the ship decorated with gold and precious stones, suggests sailing on the Euphrates a fairly long distance from Babylon. From W. Andrae's excavations at Assur² we know that the "New Year's Feast House", erected by Sennacherib, was outside the town, and we may give the dimensions of this, as we shall thus presumably be able to form some idea of the size and character of a *bît akîtu*. In one of his inscriptions Sennacherib regrets that unrest and

¹ East India House Inscr. V 18 (I R 53-58).

² W. Andrae, *Das wiedererstandene Assur* (1938), pp. 151 ff.

rebellions have long prevented the god Ashur from celebrating his great festival outside the city as was fitting, but have instead confined him to the city itself; the king therefore sets about building him a *bīt akītu*, "from its foundation to its walls I built it exclusively of mountain limestone".¹ The temple building was surrounded by a close plantation, fruit trees and a garden, two canals were dug along its sides for irrigation; its area was 67×60 m, and it had an inner court of large dimensions as compared with the total area, 51×47 m. The court was planted with tall bushes, a wide road cut through it, along which processions reached the cult chamber which had three entrances and an area of 33.20×7.80 m. Here the great struggle between Ashur (in Babylon: Marduk) and Tīāmat was enacted, here the creation was repeated to ensure the fertility of the new year and peace for Assyria (Babylonia).

§ 6. In addition to the great deities and the local city gods, whose continued worship had received the sanction of the central government, we find the nameless tutelar deity *il amēli*, *ištar amēli*, "the god of man, the goddess of man", whom we know from the invocations of the texts: "my God (Goddess)" (*ilija*, *ištarja*). Of course the patron deity of the large cities as of the kings is one of the "great 60" Assyro-Babylonian gods who, like the house-god of the Ur-Nina Dynasty at Lagash, have names, but the nameless god is the real god of the civil population, the central figure of the private cult. The notion of a patron deity does not occur until the time of Hammurabi's letters, which does not exclude the possibility that the idea goes as far back as Sumerian culture (cp. the relation of Gudea to Nin-gish-zī-da). The patron deity is especially important to ordinary people as an intercessor with the great gods, as is apparent from the rites in which man's relation to the gods is regulated through sickness and misfortune in connection with or without demonstrable sin and guilt. The patron deity is then imagined to assist man as his protector. When a wrong has been committed the patron god retires in anger from man, but returns with a good grace if invoked in prayer, by which it is attempted to wipe out the act committed by repentance and penance in connection with the sacred rites.

¹ O. Schroeder, *Keilschrifttexte aus Assur historischen Inhalts* II (1922), No. 122: 32-33 (WVDOG XXXVII).

Special good powers (*šêdu* and *lamassu*) are thought to protect men's abodes and are called *ilu bîli*, "the god of the house".

The necessity of patron deities for men and dwellings, deities who at any moment of the day are ready to protect and help, is a natural consequence of the fact that the great name-bearing gods only come into contact with the citizens at the great festivals through the visual impressions they receive of the processions, and that their functions are for the benefit of the city i. e. for all men collectively, for instance by the "determination of destiny" at the *akîtu* festival, just as the great gods also control the natural phenomena and the course of the heavenly bodies. But because the inhabited world is filled with countless invisible but hard-hitting hostile demons the tasks of the patron deities are numerous and exacting.

All the demons and groups of demons are thought to bring sickness and calamity to men and are supposed to come from uninhabited regions, deserts and wildernesses. "The evil seven" is a collective term often met with;¹ of these Asakku brings consumption, Nam-tarru attacks the neck and throat, Utukku the back of the neck. Alû's domain is the mouth, lips, and ears, Ešimmu's the middle part of the body, but the points attacked by Gallû and Râbišu are unknown. Further we hear of two triads, Labartu, Labašu, and Aḫhâzu whereof the first infects children with sickness while the two latter come upon men like cold shivers and "make man's body yellow, his face yellow and black, and even make the root of his tongue black."² The second triad is Lîlû, Lîlîtu, and Ardat Lîlî, who seem to cause all the evil which can befall a man in the darkness of night and sleep; finally each distinctive illness has its demon which causes it, we need only mention Ti'û who brings headache. But also the machinations of wicked people, for instance by the aid of sorcerers and witches (*kaššapu*, *kaššaptu*) are dangerous like those of the demons; they act by virtue of the "evil eye" (*pānu limnu*) and the evil incantation issuing from the tongue and mouth (*lišānu limnu*, *pû limnu*).

Therefore the people go to the *bîl rimki* of the temple where the *âšipu* priests are able to exorcise the evil demon by means of a ritual exorcism (Sum. *en₂*, Akk. *šiptu*), aided by the *ramku* priest who performs the ritual ablutions; in return men bring offerings to the

¹ Cf. e. g. the series *asakke maršûli* (12 tablets; CT XVII, 1903).

² K. 61, IV 26 f. (F. Kùchler, AB XVIII 1904).

supreme god of exorcism, to the administration of the temple, and to the priest officiating at the ceremony. Water and fire are the universal remedies against evil, and countless are the texts¹ in which the evil demons are exorcised by these means combined with the powerful words of the incantation itself, which is recited by the priests.

As an example of the wording of an incantation we quote one of the texts (the 11. tablet) in the series *asakkê marṣūti*:

"An Asakku has approached man's head.
 A Namtarru has approached man's throat.
 An evil Utukku has approached his neck.
 An evil Gallû has approached his chest.
 An evil Eṣimmu has approached his stomach.
 An evil Alû has approached his hand.
 An evil deity (*ilu lim-nu*) has approached his foot.
 All the seven of them have attacked him.
 Like a blazing fire they have set his body aflame.
 He cannot eat, cannot drink water.
 He cannot sleep or find rest.
 The god Marduk saw him.
 He entered the house to his father Ea and told him.
 Go, my son Marduk!
 Take a white summer lamb,
 Lay it near the sick man,
 Tear out its heart, and
 Put it in that man's hand!
 Recite the incantation from Eridu!
 Invoke the great gods (thus):
 Let the evil Utukku, the evil Alû, the evil Eṣimmu,
 Labartu, Labaṣu, Asakku, Namtarru.
 Who torment the body of man be expelled and leave the house!
 (Let) a good spirit, a patron god come to stay!
 Evil Asakku, evil Alû, evil Eṣimmu, Labartu, Labaṣu,
 Heart disease, heart trouble, headache, toothache, sickness.
 And heavy affliction.
 By heaven and earth be exorcised!"²

¹ Cf. H. Meissner, *Babylonien und Assyrien* II (1925), pp. 212-41 and our selected bibliography pp. 747 ff. (Section 13. Religion).

² CT XVII (1903), IX 1 ff.

Here a lamb is ritually slaughtered and its heart laid in the patient's hand which act in connection with the incantation of the *āšipu* priest expels the demon. Numerous texts have the same conclusion, "Be exorcised by heaven and earth" (*nīš šamē lû ta-ma-a-li nīš iršitim lû ta-ma-a-li*)¹ often varied as follows, "Be exorcised by the great gods"; or "I exorcise thee by Anu, father of the great gods".

In another exorcism series, *Šurpu*, in Tablet V, we hear how a man has been attacked by an evil demon, he moans and wails because his patron deity has left him. But Marduk hears this and appeals to his father Ea, and the latter tells him to take the sick man to "the house of the sacred ablutions" (*bīt rim-ki el-li*) in order that the curse (*māmītu*) imposed upon him may be removed; there, by the use of the water, and by Ea's power, the evil demon will depart as easily as a date is split, a young shoot broken off.² In the *Maqlû* series the priest, on Tablet VII, makes small images (resembling a human being) which are placed in a wash-basin. The incantation accompanying the ritual ablution runs as follows: "May it (the sickness) be thrown out with the water of my body and the washing water of my hands, on thy head and image (*lānu*) be it, and may I live."³ The water with which the patient is washed takes away all sickness and demoniacal power and is absorbed by the small image in the basin. In a final ceremony the image is destroyed by fire, the evil is then completely rooted out. The *Šurpu* and the *Maqlû* series both take their names from the final burning ceremony of the incantation ritual.

Through the exorcism ritual the sick and afflicted are given relief and saved from the evil of the demons; through the medium of the omen ritual men gain knowledge of the will and intentions of the gods and may then try to adjust their actions and manner of living to them. In all cases where omens are to be interpreted the *bārû* priests come to the aid of men. The will of the gods is revealed everywhere for, as we have seen, this world is an ingeniously created cosmos in which everything is firmly established from the dawn of time. Thus the gods reveal their intentions and give hints as to the

¹ See e. g. 11 R 17 and P. Haupt, *AB* I (1881), No. 11.

² *Šurpu* V 1-59 (ed. by H. Zimmern, *AB* XI 1896).

³ *Maqlû* VII 77-78 (ed. by K. L. Tallqvist 1894).

events of the future through the writing which the stars in their silent courses imprint on the vault of heaven. Thus we may mention omens taken from the moon, its phases and eclipses: "When the moon is seen on the first day of the month there will be peace and quiet in the country.—If the moon when it becomes visible is covered with a hood the king will attain the greatest power.—If the right horn of the moon is long when it appears, the left short, the king will get in his power a country that does not belong to him. If an eclipse occurs in the month of Nisannu in the first night watch, havoc will be wrought, one brother will kill the other . . . If it happens in the month of Simânu it means that there will be fish.—If it happens in the month of Du'ûzu the crops of the country will thrive . . . If it occurs in the month of Abu Adad (the weather god) will bring a flood.—If it happens in the month of Ulûlu the enemy will inflict a defeat on the country . . ."¹—Or through the animals, their different ways of behaviour or manner of existence the gods may give men an omen for the future which the "seer" alone can interpret. But men can also deliberately try to obtain omens by letting the *bârû* priesthood take a survey of the liver of a lamb after it has been slaughtered. In this way the king always tried to gain some insight into the intentions of the gods, for instance, when a war was impending. The taking of liver omens is assigned to such distant times as the Agade Dynasty (2303–2108); like the exorcising ritual, the interpretation of omens is the Semitic inheritance from the Sumerian religion.

Sickness, suffering, misfortune, years of scarcity in agriculture, and sudden death are primarily due to the designs of demons, but may also be a result of the transgressions of men. Above we saw (Chapter XII § 9) that the Babylonians knew the limits set by the courts of justice to the too unrestricted display of passion in the shape of violence, encroachments on the rights of others, murder etc. while they have likewise, by creating a male ideal, given us an impression of what sort of conduct they regarded as right and best. Family discord, falsehood, insolence, loaded weights, forged wills, adultery with the wife of another man, bloodshed, thievery, hypocrisy, false marking of boundaries, failure to keep promises, and spreading of rumours were banned.

¹ Ch. Virolleaud, *L'astrologie chaldéenne* (1905–12), Sin No. XXIV.

Those who have confessed to offences against the said interdictions must be purified by the expiation rites (*kuppuru lakpirta*). The liturgical texts used here may be divided into two groups. One of them, *er₂-šem₃-ma* or the "flute lamentation" (or "dirge accompanied by drumming"), was in general terms, not special in character, the other, *er₂-ša₃-hun-ga₂*, "lament for the soothing of the heart", is of a more individual character. These texts say that sins and transgressions are the causes of the sufferer's condition, and the latter then tries, often in the form of a dialogue with the priest, and with the latter as intermediary, to propitiate the angry gods. Often the sufferer in the texts also appeals to gods unknown to him, and states his offences, both those known and those unknown to himself, as the possible cause of his misery. This train of thought shows the Babylonian's strong feeling of the permanent insecurity of life. Unwittingly, un-awares, man in spite of all his watchfulness, may have transgressed one of the rules of the countless gods, nay the gods are so numerous that men cannot manage to know even the names of them all, much less their will and commands. Therefore the lamentations often assume a form, curious to us, in which the sufferer makes all kinds of reservations. "Thou my God, whom I know or do not know, my sins are numerous, my offences great," or "The sin I have committed I know not",¹ are phrases recurring again and again.

Suffering, disease, and disaster may be recognised as the result of guilt, and if so, the plan and will of the gods are easy to see and the sufferer seeks relief through the expiation ritual by which the gods' minds are changed so that they subdue the demon they have set on to man to punish him. But undeserved afflictions are unfortunately the most dominant among the peoples of all times, and in Babylonia this has been movingly expressed in the so-called Tābi-utul-bēl's Lament (p. 678). Hence we have, on the one hand, the reserved watchfulness of the expiation ritual, on the other hand, the belief in demons, which is the religious expression given by the Babylonians to an acceptable explanation of the total insecurity of life, even though the gods created the cosmos in primeval ages. The incantation and expiation rituals are monuments of the Babylonian failure to visualise the problem of the relation between religion and morals, to use a modern term, but also their way of expressing and trying

¹ K. 2811 (IV R 10).

to solve what we call ethical problems. These two rituals determine the real living relation of mankind to the divine powers, they are the inner core of the Babylonian urban religion.

But once a year, when the great *akītu* festival is celebrated, the Babylonian must have felt the seenrity of life. Standing in the immense court in the western part of which was the temple tower Etemenanki, or in the wide procession street Aiburshabu, he saw the god Marduk's procession, felt the presence of the gods, saw the gods themselves in their magnificent procession chariots, and knew that the battle with the demons of the waters was fought till victory was won in *bīt akītu* for the fertility, peace, and welfare of the country. And in the *bīt aštammi* of the temple the government saw to it that the traveller as well as the denizens of Babylon could experience themselves by celebrating coitus Marduk and Šarpanītum's saered union in marriage, the holiest of all actions, the culmination of life: to create fruitfulness in the sensual rapture of love.

CHAPTER XIV

ART, LITERATURE, AND SCIENCES

§ 1. Through the 2000 years or more that we have certain information of the cultural life of Mesopotamia, we have noted periods in which peace and plenty prevailed. We may mention such periods as the prehistoric Warka culture, in the main without written monuments, the Early Dynastic culture period of Ur and Lagash, the first period of the Agade Dynasty, the Ur III Dynasty, Gudea's Lagash, and the Age of Hammurabi, and finally from the later periods: the Neo-Assyrian Regal Period, and Nebuchadnezzar's Babylon. On the other hand, we hardly find any increase in the contributions of art during these periods of plenty; only applied art obviously flourished in the handicrafts because of the great demand for expensive and beautiful ornamental articles. Art itself, which was always in Mesopotamia under the patronage of the state and the priesthood, rarely went beyond a certain primitive stage, and it is only in the Neo-Assyrian representations of animals that Mesopotamian art has made a contribution worthy to occupy a place in the art history of the world.

The lack of stone materials, frequently pointed out in this book, in itself set a limit to the general diffusion of the sculptor's art (*ḥarrakûtu* or *burgulûtu*) and was a hindrance to those who worked at this art, since they could never get any practice in statuary work. This is plainly seen in Gudea's time from which rich finds of sculptures in the round have been made. Hence the figurine, not the statue, was dominant, and modern trained observers are rarely gladdened by perfection. Hard stones like diorite, amongst others, cause such great difficulties to the artist that the sculptural result is mediocre, whereas good results are obtained when the sculptor works in alabaster (gypsum or lime alabaster), which is not very hard and will easily take a polish. This material, which was partly

imported from upper Egypt, was used for the execution of large, often statuesque, reliefs which were generally painted in colours and served to decorate the wall faces of palaces. The numerous small articles, e.g. figurines, which issued from the bronze caster's workshop, on the other hand, must on the whole be characterised as poor from a purely artistic point of view.

The craftsman and the jeweller, on the other hand, not to speak of the prehistoric potter, who was probably also the artistic decorator of the workshop, deserve our attention and at times excite our admiration. Coloured stone mosaic, chased gold and silver, enamelled and filigree work, the cutting of semi-precious stones, and their arrangement in many colours in bead necklaces and chains are probably the most conspicuous productions of the craftsman which the many excavations in Mesopotamia have brought to our knowledge. The seal cutter too should be mentioned, he has often produced excellent work within the narrowest limits conceivable. Among the specialities of the jeweller may be mentioned the delicate work in mother-of-pearl, while the ivory imported from Egypt since the time of Ashurnasirpal served him as material for the decoration of ornamental combs, various kinds of carved work, and for engraving human figures or animal themes etc.

In estimating the value of the sculptor's art we must remember that none of the most magnificent pieces from the great kingdoms have come down to our time. The colossal idols of Babylon, Assur, and Nineveh, merely to mention the capitals of the late period, which according to finds from the Anu-Adad temple at Assur were ornamented with pure gold, were destroyed at the downfall of the cities, or were carried as spoil to the land of the conqueror. Here they might be destroyed after the precious stones and the gold had been removed to be taken to the treasury of the king, and this was probably also the case in the late period when an inveterate hatred of the Assyrians had grown up among their neighbours. Or the stolen image of the god might be placed in the principal temple of the enemy as a sign of the god's subjection to the chief god of the conqueror, for Ashurbanipal tells us how, after his final victory over Elam, he brought back the goddess Nana from Elam and restored her to Uruk's temple Eanna, from which she had been absent for 1635 years. Yet I hardly think that the holiest of the images would

have shown us any other form of sculpture than the stiff hieratic art we know from the Assyrian statues of kings, e. g. the statue in the round of Ashurnasirpal from Kalhu. It is by its plastic art in the work with alabaster reliefs, not by its sculptures that Mesopotamia engages our attention.

The characterisation of Sumerian, Babylonian, and Assyrian art given above will be illustrated in what follows by a brief chronological survey of the chief productions in Mesopotamian art, beginning with the prehistoric periods, and the survey will finally be concluded with the reliefs of Ashurbanipal.

From the prehistoric Hassuna and Ubaid periods (Chapter VII), the duration of which no responsible enquirer will venture to estimate, we have pottery which so to speak throws that of all the succeeding ages into the shade. It is true that the South Mesopotamian Ubaid Pottery, as we know it from finds in the deepest stratum of Ur, cannot bear a comparison with the Susa I Pottery, a thinwalled article, whose decoration in its mixture of conventionalised animal figures and bold patterns places it among the most perfect in the distinguished art of ceramics. To make up for it, the northern and earlier Halaf Pottery from Arpachiyah, in the later Assyrian territory, shows us splendid articles where strong colours in bold designs, but in a quiet ornamental decoration, are further made conspicuous by the glazed surfaces.

That the other artistic products of the Ubaid Period were not on a level with the pottery is shown by Sir Leonard Woolley's finds in the "Flood Pit" at Ur of small figures of baked clay, formed in the round in this plastic material; in point of time they belong to the earliest art of Mesopotamia. The female idols (?) with the longish skulls, reptile-like features, and high pointed head-dresses wear loin skirts or belts indicated by engraving. In a sculptural respect they are interesting by the fact that the arms are free, showing a degree of skill that the succeeding long period never attained when making sculptures in the round. On the other hand, the artist was unable to place the figure freely on its legs, these are, as also in all later sculpture in the round with one exception, modelled together, their separation being only suggested by an engraved line.

The most surprising results of the Eridu excavations (1946-49)

were a number of temples from the Ubaid Period (see p. 413). Here the standard plan of the Sumerian temple with a distribution of chambers corresponding to what we have mentioned from Neo-Babylonian times (Chapter XIII) was ascertained from some part of the Ubaid Period. The ziggurat too as an architectural phenomenon was observed for the very first time at the excavation of Eridu's Temple VII (see p. 427). The height of the Sumerian ziggurats was much less than in Babylon, but the architectural type is already seen: the square cube. During the great culture period, the Proto-literate Period, the architectural canon was later established (e. g. "White Temple", "Limestone Temple" at Warka, see pp. 427 f.). The only deviation from the above-mentioned temple type is the oval temples at Khafājah and Tell Al 'Ubaid, from the Early Dynastic Period, but the temples themselves with the two round enclosing walls was of the usual Mesopotamian type. Similarly, the excavation results tend to show that the city governor's house as well as private dwellings were of the character later found everywhere down through the ages, and which in Chapter XII was seen to be a result of climatic conditions and defensive measures.

Of single objects from the Proto-literate Period we may mention the fine alabaster vase on which we see cattle and the produce of the fields brought as offerings to the gods by naked priests. The representation of the human figure is stiff, but the artist is able to give it entirely in profile, an accomplishment which was lost in the Early Dynastic Period, and the cattle for the slaughter has been given with good observation and with some stressing of the muscular strength which so largely dominates all later Mesopotamian art. From the Proto-literate stratum of Warka we also have a female marble head 20 cm. high; the hair which is waved is parted in the middle; coloured inlays, now lost, in the brows and eye sockets have given life to the face. The artist has shown an ability to work in the hard material and has given us the earliest known Mesopotamian portrait head.

Beautiful designs on seals are known from this period. From the Proto-literate Period we have the vivid drawing of a leaping buffalo eating of the leaves of the trees; the close observation of the life and habits of the animals which culminates in the Neo-Assyrian

reliefs may thus be traced back to this period. From the Proto-literate Period two kinds of seals were in use in Mesopotamia, employed as the owner's mark, perhaps his signature if the seal was inscribed, to seal official documents, contracts, wills, etc. Stamp seals provided with a small handle soon went out of use, while the cylinder seals for rolling were still in use right down to the Persian time. The stamp seals were impressed in, the cylinder seals rolled over, the clay documents while they were still wet and the clay tablets were then sun-dried or baked. Cylinder seals have been found by thousands, but many of the pictures on them are only known from the impressions in the clay, while the cylinders themselves have disappeared. The representations on the seals are very varied even though definite groups can be mentioned, such as scenes of sacrifice, libations, gods and humans, mythological scenes (i. a. Gilgamesh and Enkidu fighting the bull), hunting scenes, symposia (especially from Ur I), animals, heraldic and ornamental patterns. The earliest known seals from the scriptless culture of the Halaf Pottery must perhaps be regarded as a kind of potent charm or amulet.

The Early Dynastic time, the period of the early Sumerian city-states, is undoubtedly, apart from the Neo-Assyrian time, the most productive of all periods from the point of view of art history. Of sculpture in the round we may mention the small statues of gods from Tell Asmar with the large all-seeing eyes and the crossed, clasped hands characteristic of Sumerian sculpture, and the freely modelled arms; these small statues are stiff and wooden and without life. The same position of the arms and hands is seen in the Kur-lil figurine from Tell Al 'Ubaid, the Mari statues, and the statue from Assur's G Stratum, but Kur-lil is the poorest as the artist has not been able to keep the arms free of the body. An interesting sculpture in the round, a female worshipper was found in the north in the neighbourhood of Kirkuk; the body is draped in the female dress and the arms are not free; the execution of the hands is childish and unrealistic, but the head is sculptured with a portrait-like realism.

The finds from the royal tombs of the Ur I Dynasty have given us knowledge of the unsuspected riches of that time, the skill of its craftsmen, and the costliness of their materials. Cups and bowls of gold,

a gold dagger and a gold helmet which has covered the head of a certain prince, with a fillet, hair-knot, and the hair chiselled in the precious metal, may be mentioned as among the finest jeweller's work. Another distinguished piece of work was the "standard" with two scenes from war and peacetime executed in mussel shell on a mosaic background of lapis lazuli and red limestone. The human figures are stiff, the war scene is reminiscent in many features of Eannatum's "Stele of Vultures", but the asses drawing the war chariots are lifelike.

Of the representations of animals from the tombs of the Ur I Dynasty we may mention the beautiful picture on a seal from the tomb of Shub-ad and the vividly rendered ass, a small sculpture in the round on Shub-ad's bridle ring. The sniffing ass with one ear laid back, and the contemporary round sculptures from the temple in Tell Al 'Ubaid, of copper bulls which stop, turn their heads sideways, and listen, are the best work that has been produced by the Sumerians in the way of animal representations.

From the early period of Lagash, contemporary with the Ur I Dynasty, we know of no round sculptures, but we have not a few reliefs. The skill of the artists was limited. The head, neck, and lower part of the human body are seen in profile, while the chest, shoulders, and arms are represented from the front; Eannatum's "Stele of Vultures" shows the culmination of the art of Lagash. It is a primitive art, in which the nose and eyes are accentuated, while the limbs are wooden, and the attitudes stiff and lifeless. From his nephew Entemena's time we know a magnificent vase of chased silver with representations of heraldic animals.

The Agade Dynasty marks the first Semitic seizure of power in southern Mesopotamia; the second, which put an end to the supremacy of the Sumerians, begins with the Hammurabi Dynasty. Few artistic productions are known from the Agade Period. The time of the rulers was occupied with the organisation of the administration, wars, and extensive campaigns westward. We may mention the splendid bronze head from Nineveh and a number of fine cylinder seals; of these we may note Sargon's own seal with the heraldically opposed, drinking buffaloes; another found in Tell Asmar where we see Gilgamesh and Enkidu (? "the bull man") fighting a buffalo and a lion and in which the animals are excellent; and Ibil-

Ishtar's, the seal of the king's brother. In the latter may be noted what the seal cutter could do in the way of representing the human figure on a very limited surface. Here we see 5 larger and 2 smaller figures: the artistic execution corresponds to what we mentioned when we discussed the earlier reliefs from Ur-Nina's Lagash. The stela, two metres high, erected by Naram-Sin to commemorate his victory over the Elamite Lullubians and found in Susa, to which the Elamites carried it off when later on they gained the ascendancy, is a splendid monument of the first Semitic period of greatness. Above, at the mountain top, we see the slender figure of the king, the best modelled human figure in all Mesopotamian art, with the stars overhead, while the slain enemies lie prostrate at his feet, sink down, or flee. The king's army follows him towards the peaks in a mountainous wooded land.

The ten statues in blackish-green dolerite from the excavations in Telloh, the ancient Lagash, date from the time of Gudea. Nine of them represent Gudea himself and are nearly all headless. In these we see progress in the sculptor's art. The skeletal frame and the muscles keeping it together are executed with more care than was the case in earlier Sumerian round sculptures; the folds of the skin at the knuckles are modelled with more realism and the accidental folds and creases of the draperies are reproduced with fidelity. The figures are represented sitting or standing, but as a whole they are wooden and stiff, also as far as the relation of the head to the body is concerned, the neck being too short. And the arms are not kept free of the body on account of the artist's want of skill, but the head is executed with care, one might almost say delicately; most skilfully modelled is a figurine torso of a distinguished lady in the attitude of a worshipper; the arms are not free, but the modelling of the neck is correct. On the stela of Ur-Nammu of Ur III, contemporary with Gudea (see p. 483⁴), we see the same awkwardness that we found in Ur-Nina's reliefs; the head is in profile, but the shoulders and chest are seen from the front, whereas the figure composition and the accurate reproduction of details in the dress of the persons show a great advance upon the earliest Sumerian times.

With the victory of the Semites, the founding of the Hammurabi Dynasty, and the splendour and might displayed in the great law-giver's reign of 43 years, during which, as we saw in Chapter X,

new departures were made in the state and social organisation, all independent creation of art died out in Babylonia. The past was copied, as may be seen for instance from the relief-like representation over the record of the restoration of the Shamash temple in Sippar by Nabû-apal-iddin (885–852) and without any new conquests artists continued in the traditional manner and moreover showed a decline in draughtsmanship, figure composition, and artistic poise. From the time of Hammurabi we have the good portrait of the king himself and the famous law stela, but the relief on the latter is executed in the traditional manner, and the shortnecked Hammurabi himself in the attitude of a worshipper with the arms as if glued to the body, recalls the poorest statues of Gudea's time; even his head-dress is from that time.

Hence it seems to me a reasonable presumption that the art mentioned above was due to, and executed by, Sumerians. Naram-Sin's inscriptions are written in the Akkadian language but this does not exclude the possibility that the victory stela may be Sumerian work. The decline of art after Hammurabi, when the Semitic Babylonians were firmly seated in the saddle and held all the key positions in the state, tends to show the same. I therefore regard the small bronze figure overlain with gold and silver, which vividly gives a kneeling worshipper, "Adorant de Larsa", as the swan song of Sumerian art. The little sculpture is in the round and dated to Hammurabi's own time by a Sumerian inscription on the three sides of the base. Here we see a remarkable advance in the sculptural composition, the wrist of the lifted hand being free of the body. The legs too are separate even though the seam of the long robe forms a connection between them.

Under the foreign rule of the Kassite Dynasty for 576 years (1740 (1430)–1165) our knowledge of Babylonia is very limited, just as the number of objects found is very small. Nevertheless a new departure in art goes back to this time, the so-called *kudurrêti*, or "boundary, stones". These were provided with inscriptions and reliefs which show a summary and traditional conception of art. Originally a *kudurru* was a record of or a confirmation of a royal gift in the form of a plot of land or a field to one of the king's officials or servants, and the inscription entrusted the newly acquired piece of land to the protection of the gods. Later a *kudurru* seems to have lost its orig-

inal function as a boundary stone and was kept in the owner's house as a kind of indestructible document, or was set up in a temple by which the field was consigned to the protection of a god. In research, the "boundary stones" are important because they are often our only source of knowledge, however slender it may be, about certain Babylonian kings and the historical events of their reigns.

From Nebuchadnezzar's Babylon we may mention the artistic embellishment with coloured enamelled bricks known from the frontal decoration of the throne-room building in the "South Palace" as an example of ornamentation, from the Ishtar gate we have monumental animal reliefs. The art of enamelling bricks was hardly an independent innovation of the Chaldeans in Babylonia, but was inspired by the Assyrian fresco painting. The technique was as follows: the design, realistic or ornamental, was executed on large clay plates and was then painted, after which the plate was cut into square slabs which were burnt, to be finally assembled to the original picture.

Assyrian art is in the first place represented by large alabaster reliefs, but the monumental form of decoration, the fresco painting, which shows Egyptian and Cypriote influence, would seem to be earlier. As to the use of glazed terra-cotta tiles as a palace decoration in Assyria Woolley¹ has pointed out Alalah (Tell 'Aṣḥānah Lev. II c. 1300) as a possible provenance. For the decoration of the walls of his palace in his new capital Kār-Tukulti-Ninurta, such paintings were used by Tukulti-Ninurta I (1234-1198), and also by much later Assyrian rulers. Tukulti-Ninurta II (890-884) and Sargon II (721-705) reintroduced this artistic technique in the palaces at Assur and at Dūr-Sharrukīn respectively. In the remains which are left of this art we see a much freer, partly impressionistic, style than in the hieratically heavy and stiff reliefs, and must deplore that so little of it has come down to us.

Among the sculptures we shall here only mention the nude female torso, probably a goddess, which A. H. Layard found in Kuyunjik. It is a round sculpture with the lower extremities cleaving together, but the arms seem to have been free of the body. The torso is not without a monumental effect but the artist has been wanting in ana-

¹ Sir Leonard Woolley, *A Forgotten Kingdom* ... (1953), pp. 93-95.

tomical knowledge as well as great artistic skill; the figure is conclusively dated by its inscription to the period of the Assyrian ruler Ashur-bêl-kala (1082-1066). Impressive and alarming is the statue in the round of Ashurnasirpal (883-859), but the artistic skill is poor. The arms cleave to the body and the lower part of the figure from the hips to the feet has the effect of a wooden block. The Assyrian kings are often depicted in statuary reliefs but we never seem to see any attempt at an artistic portrait in the hieratic representations with the uniform head-dresses and the well-dressed beards.

The Assyrian reliefs are a great experience. On flat alabaster plates, often life-size, scenes are chronicled of the life of the kings, their hunting and military exploits, which give us a wealth of information that we could not obtain elsewhere, and to which we have resorted again and again in Chapter XI. It should also be added that our experience is of a very grave nature where the scenes represent the sacking of towns, the torturing and massacre of captives. Apart from the moving figures of soldiers fighting or on the march, attacking or laying siege, the main actor, the king, as well as his immediate entourage are hieratically stiff in the artistic execution with an exaggerated drawing of the muscular forms and swelling outlines. The chief series of connected reliefs are derived from Ashurnasirpal's palace in Kalhu (Nimrûd) and from the bronze gates of Shalmaneser III's palace at Imgur-Enlil (Balâwât), the poorest from an artistic point of view, and further from Sennacherib's and Ashurbanipal's palaces at Nineveh.

The animal representations in the relief of the latter palace enjoy a well-deserved universal fame. In contrast with the exalted and nearly immovable human figures in whose countenance no passion can be traced, all feelings being controlled, we see the hunted animals' fury and fear, seem to hear the roaring of the lion and feel its unspeakable pain as it drags after it its hind body in part paralysed by the arrows, or plants its forepaws hard against the ground, shaking convulsively while the blood streams from its jaws. The chasing of wild horses is a wonder in itself, we see an animal hit by arrows lying on its back, beating the air in its death agony; barking dogs pursue a wounded animal, into one of whose haunches and hind legs hounds have dug their teeth; the animal's flight through the pictorial field forms the background to the fleeing mother

animal who looks round anxiously after her foal which is pursued by a dog, and so pauses in her flight. Everything is observed, conceived, and reproduced with the most delicate artistic understanding and skill, qualities which the Mesopotamian culture peoples were unable to bring to bear on their execution of human figures. These remained half primitive, half conventionalised, and this also applies to the monumental fanciful animals, *šédû* or *lamasâti* (?), which guarded the entrance to the palaces of the great Assyrian kings, flanked by reliefs whose above-mentioned representations of animals are unsurpassed in their impressionistic naturalism.

§ 2. Supplemented by the eloquent language of the excavations all our knowledge of the three Mesopotamian cultures is derived from the literature, or rather, since the term Babylonian literature means something quite different from e.g. Greek literature, from the texts. The number of these is constantly increased by new finds so that the editorial work cannot keep up with the steadily growing collections in the museums, nor is it any longer possible for one man to find time for a study of the whole literature. The texts are partly inscribed on costly or useful objects (ornamental swords, gold and silver vessels, cylinder seals etc.), partly carved on monumental pictorial representations (statues as well as reliefs with many figures) and on votive offerings, and partly separately on clay tablets.

The latter, the size of which in Ashurbanipal's Library ranges from 40×25 cm. to 3×2 cm., with an average thickness of $2\frac{1}{2}$ cm. were cut to various sizes out of large wet clay masses, the characters were then impressed on the front, frequently also on the back, with a three-faceted blunt instrument made of wood, metal, or ivory. After this the tablets were baked so that the writing on them is visible to this day after many thousand years. The script being invented by the Sumerians it runs from left to right contrary to the writing customs of the Semitic peoples. To the modern observer it seems to consist of one character only, a wedge with a larger or smaller head in different positions and in a multiplicity of combinations. To mention some examples: the preposition "in or to", Akkadian *ina*, consists of a single wedge placed horizontally, the noun "nail", Akkadian *šupru*, consists of 20 wedges in different positions. Originally, however, it was based on pictorial forms which owing to the character of the

material (wood, bone, metal) were simplified to form the stiff wedges in various combinations. The script has over 600 basic signs, but in order to be able to read it without error it is necessary to know the mutual combinations of these basic signs, and the fact that the signs originally applied to Sumerian, non-Semitic, sounds and semantic values has further complicated the matter. We may undoubtedly regard the cuneiform writing as the most difficult script we know (see Chapter IV), and the Assyriologist often experiences the truth of the old saying, *Ars longa, vita brevis*.

In Neo-Assyrian times leather scrolls or a similar material were also used ("parchment", *kuššu*; papyrus, *ni'aru*) for the stamping of numbers, as may be seen in Sennacherib's reliefs, where scribes are registering the number of heads cut off. Further it should be mentioned that M. E. L. Mallowan in Nimrūd, during the excavations in 1953, discovered cuneiform writing on wooden tablets: "Furthermore, we have here for the first time actual proof of written statements that the Assyrians wrote upon tablets of wood, overlaid with a specially-prepared wax. Fragments of fine writing on a substance which has now been analysed as wax were also found in association both with these ivory boards and with others made of wood. Perhaps, too, this discovery may explain the extraordinary failure to find cuneiform documents at Calah on materials other than stone, during the period of kings so active as Assur-nasir-pal II. It may well be that at that time contracts and other documents were written on wood and have perished forever".¹ But the clay tablet was quite predominantly the document and book of the Mesopotamian peoples throughout historical times. The largest collection of cuneiform tablets come from the temple archives (Nippur, Sippar) and from the state record offices of the royal palaces, notably we must mention with veneration Ashurbanipal's Library at Nineveh, comprising from twenty to thirty thousand clay tablets now in the British Museum, London, because it was deliberately collected by a single man for the purpose of preserving the past and the contemporary literature.

During the British excavations of the palace ruins under the mound of Nineveh called Kuyunjik, Hormuzd Rassam found in December 1853 in the so-called "North Palace" built by Ashurbanipal, the

¹ *Ill. London News* 22.8.1953, p. 297.

latter's unique library¹, or the remains of it which had survived the ravages of time. Many of the tablets were broken. On almost every one of the important tablets in the royal library at Nineveh we find Ashurbanipal's exlibris: "Ashurbanipal's tablets (*fup-pi*), he who is King of the World, King of Assyria, and who trusts in the gods Ashur and Ninlil". Often a copied text² consisted of many tablets; that they belong together is seen partly from the so-called "catch-line", a single line indicating to what series the table belongs, partly by the number of the tablets on which the text is written being enumerated on the last tablet, where sometimes also the name of the scribe and the number of lines written are registered. Catalogues, for instance of tablets with omens, containing interpretations of them, have been found as well as literary catalogues³.

Ashurbanipal purposely collected his large library. Thus in a letter to Shadûnu (*CT* XXII (1906), 1) the king requests the latter, assisted by officials and other servants of the king at Borsippa, the neighbouring town to Babylon, to collect inscribed tablets, both in the houses and in the temple Ezida. The king mentions particular series he is looking for, and demands valuable tablets not existing in Assyrian translation. In addition to collecting and copying, Ashurbanipal also systematically arranged the texts, perhaps revised them. In one of the formulae on the tablets we read: "I have arranged them (i.e. the tablets) in classes, have revised them, and placed them in my palace so that I can read them . . . He who takes away this tablet, or writes his name beside mine, may Ashur and Ninlil persecute him with anger and hatred and destroy his name and descendants in the land" (M. Streck, *VAB* VII 2 (1916), p. 356).

The library was totally destroyed when in 612 the Medes and Neo-Babylonian Chaldeans captured Nineveh, which was so completely wrecked by fire that in Antiquity it was for a long time quite unknown where its site had been. A single tablet in the British Museum, part of a business letter, shows traces of the violent heat to which it was exposed when Ashurbanipal's palace with its library

¹ As to Tiglathpileser I's temple library at Assur, see E. F. Weidner, *AOF* XVI (1953).

² That it is a copy is often emphasised by a statement such as *kima lablri-šu šafir-ma bari* "written like its original and collated" or *gub-ri Babiliki ša-fir-ma bari*, see e. g. F. Thureau-Dangin, *RA* XIX (1922), p. 85.

³ See AO 5393 (*TCL* XV (1930), No. 28) and CBS 29.15.155 (S. N. Kramer, *BASOR* 88, 1942).

was burnt down. But fortunately for posterity, its literary treasures had been committed to a material which the fire was not able to destroy; several tablets were found which were cracked or fused to an illegible mass, but the main part was well preserved, hidden under the large mound on which Kurds and Arabs had for centuries grazed their sheep. The cuneiform texts were partly copies of earlier texts, partly a kind of new text-books for students: lists of words and synonyms, paradigms, problems in arithmetic, and notes on difficult texts.

Ashurbanipal's Library will always form the core of our knowledge of Assyro-Babylonian literature. The main sources of our understanding of the Sumerian language and culture were for long the texts from Lagash, notably from the time of Gudea, and Nippur, but since 1918 these have been supplemented by rich finds of cuneiform tablets from Uruk, Jemdet Nasr, Ur, Fara, Drehem, and Jôkha. By far the predominant part, about 90 p. c., of the Sumerian texts deal with administration, industry, commerce, and farming.

Our account in this book of the Mesopotamian cultures is based on the cuneiform texts combined with the observations of archaeology. Hence in the preceding part we have again and again had occasion to quote or draw upon the literature as it has been preserved down to our time in all its shades. It remains for us to take a survey of the contents of the literature. But first a general characterisation. Through thousands of years we meet with texts unchanged in character, no new style or new expressions set their mark on what is written, the subjects appear to be the same, no new ideas speed up the development. We know no author's name except that of the law-giver and letter-writer Hammurabi; Utnapishtin and Tâbi-utul-bêl are fictitious authors' names on tracts, the contents of which are moral exhortations and laments on the insecurity and incomprehensibility of life. The royal annals lack individual character, we can only note a difference between the pious and peaceful Babylonian accounts of the restoring of temples and the digging of canals, and the sanguinary military records and bombastic eulogies of kings in Assyria. Practical realistic scenes appear in Sennacherib's annals but cannot compare with the intense and ponderous poetry which sustains some passages in the Gudea inscriptions. Otherwise it must be said of the Sumerians that their texts bear witness to a unique dry adherence to the matter in hand. Broadly it can be stated that

the Mesopotamian cuneiform literature was written by the priests, the administrator of the land, and careful businessmen and farmers.

While in many cases it is possible to date the secular texts (royal inscriptions, laws, letters, business documents), if they do not actually bear a date themselves, the dating of the religious literature is more difficult. But we have previously in this account (Chapter IX) after a careful consideration of all the possibilities and the textual evidence, put forward the conjecture that the period from the Isin-Larsa Dynasty to the Age of Hammurabi must be regarded as the time when the religious literature was finally codified. It does not follow that the genesis of the texts may be assigned to the period 2026-1750; the purely ritual literature, such as incantation texts, omens, hymns to the gods, as well as the religious epics, apart from *Enuma elish*, is undoubtedly of Sumerian origin. This is confirmed amongst other things by the mythological scenes represented on conclusively dated Sumerian cylinder seals.

It is, however, a problem when the specifically religious texts have been given the canonical form (*damḡūti*) in which we know them. Linguistic or other indications (e.g. the metre, parallelism, three-verse groups instead of distichs in early Babylonian times, the non-Sumerian idea of sin in the elegies) may here be our guides. However, B. Landsberger,¹ A. Falkenstein, and W. von Soden found a comparison with the Akkadian texts from the Ištattushash (Boghazkeui) archives from the 14.-13. century most useful. These in the main show a precanonical redaction (*aḥi'ūti*), though some few lexical works occur in canonical form. If we add to this that the literary texts from Assur under Tiglathpileser I (1116-1078) have a canonical text and serial title, and we are told in a hemerology (VAT 9663: KAR II No. 177)² that the Kassite king Na-zimur₂-tash (1313-1288) made earlier texts from Sippar, Nippur, Babylon, Larsa, Ur, Uruk, and Eridu the basis of texts, W. von Soden³ thinks that it may be allowable to establish that the period 1350-1050 was the time when Akkadian canonical literature came into existence. Of the later Neo-Sumerian literature, too, the canonical composition, A. Falkenstein⁴ thinks, can be referred to the later Kassite

¹ See W. von Soden, *MDOG* 85 (1953), p. 22.

² René Labat, *Hémérologies et ménologies d'Assur* (1939), p. 162: 26-32.

³ *MDOG* 85 (1953), pp. 14-26.

⁴ *Ibid.* pp. 1-13.

period, while the canonical form of the earlier period must be dated at 1750–1600, the actual time of writing being about 2050–1750. These arguments and observations are most interesting, but for the present, I think, we must hesitate to accept them as dogmas. Our sources of information about the Kassite Period are extremely limited, but what we know about this time shows us that the kingdom had sunk into a complete stagnation from which Babylonia never rose again.

The religious literature includes hymns addressed to single gods. They take the form of praises combined with mythological-genealogical allusions, invocation, and prayer; they were the sacred texts used at the performance of the rites in the temples in special ceremonies and on special occasions and have no individual character, composed as they are by the priests, and designed to promote the welfare of the state and to obtain the goodwill and aid of the gods. Further the manifold texts of the incantation ritual and the ritual exorcism, partly those whose object is to check or expel demons, partly the accompanying or succeeding ritual laments and penitential songs, the latter also a part of the expiation ritual. The largest group of religious texts are those which comprise the various forms of interpretations of omens, and which are recited in conjunction with the omen ritual or communicated without it. Finally we may mention oracular texts and the detailed ritual texts that serve to guide the priesthood through the many details of the sacred acts.

What we call by the name of religious epics, the Creation Epic, *Enuma elish*, the Adapa legend, "Ishtar's Descent into the Underworld", and the Gilgamesh Epic, to mention only those that have been discussed in the preceding part, must hardly be regarded as literary poetry. It is true that five metrical laws, which Fr. Delitzsch¹ has laid down on the basis of studies of *Enuma elish*, seem to have been adhered to with few exceptions throughout the poetical literature, but by virtue of their contents the so-called religious epics must be regarded as didactic clerical writings; *Enuma elish* even appears to have a definite cultic background, as it seems to have been made by the priesthood on the basis of that "prompter's book" which was used at the recital during the *akītu* festival of the sacred cult text, which relates the action of the holy ritual.

¹ *Das babylonische Welterschöpfungsepos* (Abh. d. philol.-hist. Cl. d. Königl. Sächsischen Gesellsch. d. Wissensch. XVII 2, 1897).

The core of the secular literature in the Sumerian time consists of texts dealing with administration, industry, and farming, and from the Assyro-Babylonian time, of the royal inscriptions. Both groups have frequently been discussed and cited in the present account. To this may be added the historiographic texts, such as king lists, chronicles, chronological lists from Babylonia, and the Assyrian lists of eponyms. The *kudurru* inscriptions may partly be added here, they also form a transition to the private, epistolary literature. This has partly an official character, as the Amarna letters, Hammurabi's letters, the Neo-Assyrian kings' correspondence, partly a private character, but the letters are nearly always business letters. The law is represented by such distinguished examples as Hammurabi's Law Code (Chapter X) and the Assyrian laws from about 1450–1250 (Chapter XI § 7).

Of literature in our sense of the word there are only sorry remains of which we can gain no real impression. There are animal fables about the fox, horse and ox, the dog, and the calf. But whether these fables served as entertainment or were the teachings of priests we do not know. The collection of proverbs which has come down to us in Ashurbanipal's Library contains considerations of a more general tenor, a lesson without humour: "The King's Generosity leads to the Highest Official's Generosity", "When the seed is not good no germ will appear and the corn will not grow", etc. "The Exhortation of Utnapishtim (Ûnnapishtim)" and Tâbi-utul-bêl's Lament, on the other hand, show a high ethical standard, partly a bitter deprecation of the trouble and incomprehensibility of life, but they are hardly individual expressions of opinion; as regards the Lament we lack its context.

§ 3. The scientific literature is represented by philology, medicine, astronomy, and mathematics, whereas in the branch of geography we have merely lists, while the study of zoology and botany is practically unknown. Important topographical texts have added to our knowledge of the city of Babylon. Sketch maps on clay tablets of fortifications, canals, and temples have been found in Telloli (Lagash), while we have also a plan of Babylon and a "map of the world".

The Babylonians were obliged to study philology when they became masters of an ancient civilised country whose inhabitants spoke a different language, in which also the religious and historical remains of the Sumerians were written down, and whose very complicated script the Babylonians likewise adopted. The philological texts may be divided into syllabaries (lists of signs, vocabularies), lexicographical, and grammatical texts. The object of the syllabaries was to establish the phonetic value as well as the actual meaning of the written characters, two of the syllabaries (S^a , S^b) have three columns; in the middle the cuneiform character, to the left its pronunciation, to the right its name (S^a); or to the left its pronunciation, to the right its meaning (S^b); in the pronunciation column both the Sumerian and the Akkadian phonetic values are given. There are syllabaries having four columns, which include the name of the cuneiform sign in the 3rd column, so that S^c determines the pronunciation and meaning of simple cuneiform characters, S^d those of the composite characters. Among the lexicographical texts we may mention Sumerian-Akkadian vocabularies, Akkadian lists of synonyms, vocabularies of three languages (the Sumerian eme-SAL dialect—(standard) Sumerian—Akkadian; Sumerian—Akkadian—Hittite), a Kassite—Akkadian vocabulary, necessitated by the 576 years' sway of the Kassites in Babylonia, and a bilingual glossary in which Sumerian, Kassite, and other proper names are translated into Akkadian. In the grammatical texts, Sumerian verbal forms, parts of sentences, and long sentences are translated into Akkadian; these texts were very useful to enquirers in combination with the above-mentioned philological texts, when the study of the Sumerian language was started at the beginning of the 1870s in the last century. But we can now see that the translations in the grammatical bilingual texts are not very accurate from a philological point of view, and no far-reaching conclusions should be drawn from the Akkadian rendering of the difficult Sumerian language. The Assyro-Babylonian linguistic texts are practical aids, but not philology. Finally it should be mentioned that the works of pupils have been preserved which show how the cuneiform writing was practised. The 600 characters in which the language was written, partly in many different combinations, are written differently in the different ages (Chapter IV), the pictorial signs change; thus we have seven different ways of writing from the time of Ur-Nina of Lagash to the Age of Nebuchadnezzar. The writing in Gudea's time is different

from that of the Hammurabi Dynasty, and that of the Kassites differs from the Neo-Babylonian, while the Assyrian script had a distinctive character. Other pupils' works are copies from earlier texts; many errors have been found in these, but they are nevertheless of interest because not a few ancient texts have only been preserved in this way.

A list of the most important Mesopotamian philological literature is here added as a conclusion of this section; it does not lay claim to completeness but presumably nothing essential has been omitted.

THE SCHOLASTIC TEXTS.

1. Syllabaries.

1. The Sign List S^a (prototype: K. 62):

Fr. Delitzsch, *Assyrische Lesestücke* (³1885).

CT V (1898) 7-16. [Also S^b Vocabulary].

CT XI (1900) 1-5 (-13).

P. Van der Meer, *OECT* IV (1938): A-Syllabary (from the excavations at Kish).

R. T. Hallock, *MSL* III (1955), pp. 1-45.

2. S^a-Vocabulary:

B. Landsberger and R. T. Hallock, *MSL* III (1955), pp. 47-87.

3. S^b-Vocabulary (prototype: K. 110):

II R (1866) 1-4.

III R (1870) 70.

Fr. Delitzsch, *Assyrische Lesestücke* (²1878).

V R (1884) 38.

CT V (1898) 7-16. [Also Sign List S^a].

CT XI (1900) 14-18 (-23); 24-28.

CT XII (1901) 32.

Fr. H. Weissbach, *Babylonische Miscellen* (1903; *WVDOG* IV): BE 13667.

P. Van der Meer, *OECT* IV (1938): B- and B¹-Syllabaries (from the excavations at Kish), cf. Fr. Delitzsch, *Assyr. Lesest.* (¹1912), pp. 107-112.

H. S. Schuster and B. Landsberger, *MSL* III (1955), pp. 89-153.

4. S^c-Vocabulary (prototype: DT 40): CT XI (1900) 29-32.

5. S^d-Vocabulary (prototype: BM 82-8-16,1): CT XI (1900) 49 ff.

II. Sumerian-Akkadian lexical Texts (Vocabularies).

1. *a₂*-A-*nâku*:

A. The Main Text (41–42 tablets):

V R (1884) 36–37 (from Birs Nimrûd).

C. Bezold, *PSBA* XI (1889): BM 83–1–18, 1330–32. 1335.

CT XII (1901), 1–23.

B. The Extract: *ea*-A-*nâku*:

CT XI (1900) 28 and other texts in *CT* XI–XII.

H. S. Schuster, *ZA* XLIV (1938), pp. 255–58: Reconstruction of 8 tablets, the

I. Tablet being = Yale Voc. (A. T. Clay, *Misc. Inscr. Yale Bab. Coll.* (1915) No. 53, cp. A. Ungnad, *ZDMG* LXXI (1917), pp. 121–36).

II. Tablet = B. F. Zimolong, *Das sumerisch-assyrische Vokabular* Ass. 523 (1922).

IV. Tablet = Chicago Voc. (D. D. Luckenbill, *AJSL* XXXIII (1917), pp. 169–99; new ed. by R. T. Hallock, *The Chicago Syllabary and the Louvre Syllabary* AO 7661 (1940; AS No. 7)).

V. Tablet = Louvre Voc. (V. Scheil, *Nouveaux vocabulaires babyloniens* . . . (1919); Fr. Thureau-Dangin, *TCL* VI (1922), No. 37; R. T. Hallock with the Chicago Voc., see above under IV. Tablet).

IV. and V. Tablets: BM 29625 (*CT* XLI (1931), pp. 47–48) parallel with the Chicago Voc. 194–306 as to the first 53 lines, parallel with the Louvre Voc. as to the last 53 lines, cf. the above-mentioned publication of R. T. Hallock.

VII. Tablet a: A. Poebel, *PBS* V (1914) No. 105.

C. Proto-*ea*-A-*nâku*:

Benno Landsberger, *Die Serie Ur-e-a = nâqu* (1951; *MSL* II): 920 lines in two-column recension; in three-column recension one tablet (8 coll.) = Nippur Voc. (A. Poebel, *PBS* V (1914), No. 102) + up to four tablets in fragments.

2. *ĦAR.ra* = *Ħubullu*:

V R (1884) 14–15.

CT XIV (1902) 1 and passim.

Br. Meissner, *Altorientalische Texte und Untersuchungen* I 1 (1916), pp. 18–43, 57–73.

- S. Langdon, *PBS XII 1* (1917), No. 17.
 S. Langdon, *RA XV* (1918), pp. 109 ff.
 Harri Holma, *Ein weiteres Fragment der Serie ħarra = ħubullum*
 (*Annales Acad. Scient. Fennicae Afd. B*: 15,1; 1921): K. 5976.
 S. Langdon, *Babyloniaca VII* (1922), pp. 93–98.
 Lubor Matouš, *Die lexikalischen Tafelserien d. Babylonier und Assy-
 rier in d. Berliner Museen. Vorderas. Abt. Berlin I: Gegenstandslisten*
(Serie ĤAR-ra = ħubullu) (1933).
 B. Landsberger, *Die Fauna des Alten Mesopotamien* (1934; Tablet XIV).
 P. Van der Meer, *Iraq VI* (1939).
 E. R. Lacheman, *RA XXXVI* (1939): fragments of the IV., V.,
 and VII. Tablet from the excavations at Yorgan Tepe (Nuzu).
 A. Leo Oppenheim and Louis F. Hartman, *JNES IV* (1945; Tab-
 let XIII) and *JAOS*, Suppl. 10 (1950; Tablet XXIII.)
3. ĤAR.gud = inrû = ballu:
 II R (1866) 22.
CT XIV (1902) 4 and passim.
 S. Langdon, *RA XIV* (1917), pp. 75–82: the II. Tablet.
 4. SIG₇.ALAM = nabntu:
 Fr. Delitzsch, *Assyr. Lesest.* (³1885), pp. 84–85: Zürich Voc. (cf.
 K. 40: *CT XII* (1901) 46 f.)
CT XII (1901) 33–50.
 Th. J. Meek, *RA XVII* (1920), pp. 117–206.
CT XLI (1931) 49–50.
 5. ALAM = lānu:
CT XVIII (1904) 38–41.
 6. AN.TA.GAL = šaḳû:
CT XVIII (1904) 32–37.
 7. ERIM.HUŠ = anantu:
CT XVIII (1904) 46 ff.
 Brussels Voc. = V. Tablet, see H. de Genouillac, *RA X* (1913), pp.
 67 ff. and Fr. Thureau-Dangin, *TCL VI* (1922), No. 35. For a
 duplicate, BM 20–6–17, 1754, see Th. G. Pinches, *J. As.* 11. sér.,
 tome X (1917), pp. 353–55.
 8. LU₂ = amêlu:
 B. Landsberger, *ZA XLI* (1933).
 E. R. Lacheman, *RA XXXVI* (1939).
 9. AN = ^{lu}Anum:
 II R (1866) 54–58.

III R (1870) 67–69 (K. 4349: "tabula magna").

CT XXIV–XXV (1908–09; K. 4349: CT XXIV 20–50).

10. Cryptographic Vocabularies:

B. Landsberger, *Die angebliche babylonische Notenschrift* (AOF Beibd. 1 (1933), pp. 170–78: KAR 1 4, "Geheimsprache des Iaruspex").

11. Akrophonic Vocabularies:

A. *diri* = Sl.A. = *atru*:

CT XI (1900) 35 f. 45–50.

CT XII (1901) 29.

A. Poebel, *PBS* V (1914), No. 106.

B. IZI = *išātu*:

S. Langdon, *Babyloniaca* VII (1922), Pls. III–IV.

C. KA₂.GAL = *abullu*:

CT XVIII (1904) 38–41.

12. For other vocabularies or lists (animals, stones, plants), see

G. Reisner, *ZA* IX (1894), pp. 159–64: Berlin Voc.: VATh 244.

CT XIV (1902) 1–49.

A. Deimel, *Orientalia* No. 27 (1927), pp. 38–39.

III. Sumerian-Akkadian grammatical Texts.

1. *ki.KI.KAL.bi.še₂* = *ana illišu*:

II R (1866) 8–15, 38:1.

P. Haupt, *Akkadische und Sumerische Keilschrifttexte* (1881–82; AB 1).

V R (1884) 24–25.

George Bertin, *TSBA* VIII (1885).

A. Poebel, *PBS* V (1914), No. 132.

S. Langdon, *PBS* XII 1 (1917), Nos. 6 and 18.

S. Langdon, *RA* XIV (1917), pp. 1–19.

B. Meissner, *Altorientalische Texte und Untersuchungen* II 1 (1920), pp. 25–47, 65–72.

Benuo Landsberger, *Die Serie ana illišu* (1937; MSL 1).

2. Other Texts:

V R (1884) 37. 40. 45 (480 verbal forms for the 2. pers. sg. present).

G. Bertin, *JRAS* N. S. XVII (1885), pp. 65–88 (BM 81–8–30,3 = BM 46537, re-edited by S. Langdon, *RA* XIII (1916),

pp. 91-97).

CT XI (1900) 42 (BM 89-4-26, 165).

CT XIX (1904) 28 a.

A. Poebel, *PBS* V (1914), Nos. 142 and 152.

IV. Eme-SAL Vocabularies.

1. II R (1866) 59 (+ 54₂): K. 171, "catalogus deorum".

2. V R (1884) 11-12: K. 4319.

V. Kassite and Hittite Vocabularies.

1. Fr. Delitzsch, *Die Sprache der Kossäer* (1884), pp. 14 f. and Fr. Delitzsch, *Assyr. Lesest.* (*1885): 48 lines; cp. Kassite royal names transl. into Akkadian (K. 4426, publ. by Th. G. Pinches, *PSBA* III (1881), pp. 41 f. and in V R (1884) 44).

2. Fr. Delitzsch, *Sumerisch-akkadische-hettitische Vocabularfragmente* (1914; *Abhl. d. Preuss. Akad. d. Wissensch. zu Berlin* 1914, phil.-hist. Kl. Nr. 3).

H. H. Figulla und E. F. Weidner, *Keilschrifttexte aus Boghazköi* I (1916; *WVDOG* XXX 1), No. 42.

VI. Akkadian Lists of Synonyms.

1. *malku* = *šarru*:

II R (1866) 33:III.

V R (1884) 41.

CT XVIII (1904) 27-31.

W. von Soden, *Die akkadischen Synonymenlisten . . .* (1933; *Die lexikalischen Tafelserien d. Babylonier und Assyrier in d. Berliner Museen . . .* II).

2. Other Lists:

CT XVIII (1904) 1-26.

G. Dossin, *RA* XLII (1948), pp. 21-34 (Nuzu Voc.: SMN 2559).

§ 4. When Herodotus I 197 tells us that the Babylonians did not consult physicians when they were ill this must be due to a misapprehension on the part of his informants. As early as the time of Hammurabi there were physicians, and their number must have been considerable for in a series of clauses the Code of Hammurabi fixes the fees of physicians for well performed work, and punishment for bad work (Chapter X). But the Sumerians too consulted physicians who were called "water experts", *a-zu* (Akk. *asû*) or "oil experts", *ia₃-zu*, and so did the Neo-Assyrian kings. Throughout the long period which we

can survey, the land of the two rivers has benefited by the physician's art. Arad-Nana-a, physician-in-ordinary to Esarhaddon (?), has told us in a letter of his royal patient's impatience: "Thou dost not know the nature of this disease of mine, and dost not cause my recovery",¹ says the king reproachfully. We cannot of course pronounce any opinion on this special case, but in general we may say that the Babylonian physicians were excellent at diagnosing disease, whereas the therapy was never properly separated from the religious incantation ritual which we mentioned in Chapter XIII, and therefore leaves much to be desired.

The medical texts are of late origin, we know copies in the Hittite state records at Boghazkeui of Babylonian originals dating from the 13th century, and tablets have been found at Assur as well as in Ashurbanipal's Library that give us a general idea of Assyro-Babylonian medicine. Disease (*muršu*) was due to the insidious attacks of demons, but the symptoms of the various affections are described at great length in medical treatises often existing in long series. One treatise enumerates the febrile diseases and describes the symptoms, another the diseases of the respiratory organs, a third all kinds of affections of the head, a fourth eye diseases etc. The symptoms mentioned vary of course. In a disease of the temples they are as follows: flashes before the eyes, the body feels as if poisoned and there is stitch, the heart palpitates, and the knees become soft and weak. Stomach trouble, heart spasms, liver disease, and affections of the gall-bladder, for instance, are diagnosed with certainty.

Thus the physicians were close observers, and the transmitted experiences of centuries gave them a good general idea and confidence in determining the nature of a disease. But Babylonian medicine was not a science, the physicians had no anatomical knowledge, and post mortems were unknown. Therefore the art of healing worked hand in hand with the priesthood, the expulsion of the demon causing the disease being the first and most important step towards the goal, the recovery of the patient; here the *āšipu* priesthood's incantation ceremonies come into action at the indication of the doctor. Since, however, experience has shown that the affected parts of the body do not regain their health simultaneously with the expulsion of the demon, the physician also has recourse to remedies.

Shammu, which originally means "herb, plant", in the medical texts has the meaning "drug, medicine", and we know several hundred

¹ 83-1-18, 2 (Harper IV (1896), No. 391).

names of such healing herbs or their decoctions, partly without being able to identify the trees, bushes, shrubs, plants, flowers, parts of animals, or minerals which together constitute the Babylonian pharmacopoeia. In the medical texts we have prescription-like instructions with a therapeutical purpose. Thus in the above-mentioned affection of the temples, the hair is first to be cut off, then a dressing is to be applied after the sick place has been rubbed with a pulpy mass consisting of the seeds of fetid cucumber, colocynth, "hound's tongue", saffron, and *šûru*- and *edu*- plants, which were to be pounded and stirred with water and wine mixed with flour.

Night, or the morning just before sunrise, is the time fixed for the curing of the sickness. The "medicine" is brought into direct contact with the sick part. If it was an external part of the body, pulpy or gruel-like compresses were used, the exact compounding of which is described at length for each separate disease; an example was given above. If internal organs were affected it was attempted to cure them by letting the patient eat or drink the mixed medicine; by means of minute tubes of copper, bronze, or magnesite the medicine was introduced into the eye, nose, ear, or penis. Whether massage was part of the medical treatment is difficult to say, since the passes which are mentioned were at any rate known as a part of the conjuration ritual.

In the Code of Hammurabi (Chapter X) operations performed with a copper instrument, a lancet (?), are referred to; the verb used here *epêšu*, however, merely means "to act, perform (something), do something", and one wonders partly that the commonest verb of the language can be used in such a specific sense and partly that the Babylonians who excelled in specific terms, had no precise word for the unusual act of "operating". It is also stated in the clauses of the law that the doctor as a veterinary surgeon "does something" to some domestic animal's bad wounds (*šinnu*) and saves its life. Since a wound or a boil is treated with a copper instrument in human operations too, we may conjecture that the incisions, which are never mentioned in the medical texts, were of a more superficial character; deep incisions must be supposed to have been unknown to the Babylonians. We cannot therefore speak of any surgical therapy in connection with Mesopotamian civilisation.

§ 5. Holy days and weekdays in Mesopotamia were regulated by the calendar, the unit of which was day-and-night. Each of these time

units was divided into three watches (*maššartu*), thus for instance the night into star-rise time, middle watch, dawn time; the six watches were later replaced by 12 double hours (*bêru*), $\frac{1}{30}$ of a *bêru* was then called *emdu* and corresponded to 4 minutes. The exact time was marked by sundials in the daytime, for day-and-night water clocks were used, the amount of water running out of a special vessel in the interval between two rises of the same star being weighed; 1 weight *mana* (= 0.5 kg.) was equated to 2 *bêru* and denoted the weight of the amount of water in 2 double hours.

The moon marks night and day for the agriculturist, and the experience of centuries has shown him that from the new moon to the disappearance of the moon 29–30 days-and-nights pass. A month (Sum. *itu*, Akk. *arḫu*) has this number of nights-and-days and can be divided into 5 weeks according to the phases of the moon, for instance the first day, new moon; the seventh day, first phase; the fifteenth day, full moon; the twenty-first day, last phase; the twenty-eighth day, disappearance. 12 months constitute a year (Sum. *mu*, Akk. *šattu*); their names, since the day of Hammurabi, mentioned in succession, beginning with the first month, were: Nisannu, Aiaru, Simânu, Du'ûzu (Tammuz), Abu, Ulûlu, Tashritu, Araḥsamna, Kisilimu, Tebîtu, Shabâtu, Addaru; the Assyrian names of the months have been mentioned in Chapter XI § 2. It was Hammurabi who introduced uniform terms for the months by sanctioning the Nippur recension and giving it exclusive right. From the time of the Ur III Dynasty the year began around the vernal equinox (Nisannu), in earlier times it began around the autumnal equinox with the month of Tashritu, which originally means "beginning".

The number of days-and-nights of the year was 354, and experience showed that the calendar thus came to disagree with the solar year. Very early a lunisolar year was therefore established, with 13 months, which was used in some years, an intercalary month (Sum. *dirig*) being inserted into the calendar to restore the balance. How often this took place we do not know, but in 534 B.C. a fixed intercalary-month period of 8 years was introduced. This was later replaced by one of 27 years. The name of the intercalary month was the second Addaru; after the age of Hammurabi another such month, the second Ulûlu, was inserted.

The ancients (Diodorus Siculus, Cicero, Pliny) mention fantastically high figures for the number of years the Babylonians had observed the courses of the stars in the night sky. Modern travellers have told of the extraordinarily distinct appearance to the human eye of the

constellations, notably the planets, in the dry and cold, cloudless, night air of Mesopotamia, accounts I can affirm from autopsy. The silent signs of the heavens naturally compelled observation from the earliest times, and the ziggurats, the large, in later times very high, temple-towers, must have been ideal observatories. Of such we have evidence from Uruk, Nippur, Babylon, Borsippa, Sippar, Kish, Assur, and Nineveh.

In the *Enuma elish* Tablets IV-V the Babylonians have described how Marduk, the new supreme god, in primeval ages, after the victory over Tîamat, created the stars of the firmament; in this way the different periods of time are marked. He created the moon as a measurer of time for man. Seven of the stars of heaven were called *bibbu* (lit. "wild sheep") by the Babylonians where we (partly) speak of planets: the Sun, the Moon, Venus, Jupiter, Mercury, Mars, and Saturn. The courses of these were known exactly, and were watched every night by observers who made notes of them. Thus we have a series of observations of Venus from the time of Ammi-zaduga (1646-1626); that planet, which was identified with the goddess Ishtar, was the best observed, and the synodic Venus period was almost correctly calculated (587 days, the correct number is 584). Notably the different phases of the moon were registered, but likewise the relative position to each other of the sun and moon and the other 5 *bibbu*.

The heliacal rise of certain stars and of the constellations was ascertained by repeated registering, and was inter alia used to determine the beginning of the year, i. e. of the month of Nisannu. The countless stars of the night were gathered in constellations, of which several with identical names, and many without such, are registered in the same way to this day. In the Age of Hammurabi 16 constellations were known, some of which are depicted on *kudurrêti* as wandering in "the way of the sun" (the ecliptic), later the rest of the constellations were grouped in the following way: 23 stars pass along "Anu's way" (25° on either side of the celestial equator), 33 in the northern sky follow "Enlil's way", while 15 wander by "Ea's way" in the southern sky. The stars near the "hand of heaven" (*rikis šamê*), the galaxy, are divided into 4 groups of 7 each, and are subordinated to the planets Jupiter, Mars, Mercury, and Saturn. According to their heliacal rise the months are linked with certain constellations, Nisannu with "the Plough" (Cassiopeia), Abu with "the Bow Star" (Sirius in Canis major),

etc. All these stars are in one night driven round the celestial pole, except the "Chariot Star" (Ursus major, cp. the name "Charles's Wain").

The century-old observations of the paths of the stars and the planets in connection with the systematic arrangement of the splendours of the night sky into constellations originally served only one purpose, enquiry into the will of the gods (Chapter XIII § 2), which found its final expression in relation to the fate of land and people and the conduct of the individual in the doctrine of omens. From the second millennium we have detailed lists of stars, copies of which have been found in the Hittite archives at Boghazkeui, besides an Assyrian revised copy from the year 1100 being known. But from the 8th century the knowledge of the stars becomes detached from its astrological basis and appears independently as astronomy, which is studied in learned schools in Babylon, Borsippa, Sippar, and Uruk.

The results of the new branch of science can be summed up as follows. Instead of the interest centring round the mutual positions of the planets, as well as their positions in relation to the constellations, as material for the doctrine of omens, study was now devoted to the time taken by the motions of the stars. In this way the astronomers could predict both solar and lunar eclipses, an observational period of 18 years being taken as the starting point. Furthermore, in the 37th year of Nebuchadnezzar astronomers could divide "the way of the sun", the ecliptic, into 12 constellations: "the Wage-earner" (the Ram), the Pleiads (Taurus), the Twins, the Crab (?), the Lion, the Wheat-car (Virgo), the Balance, the Scorpion, the Shooting Centaur (the Archer), the Pike (Capricorn), Gula or Pabilsag (the Water-bearer), and Anunita- and the Swallow Star's Tails (the Fishes). These 12 signs pass the sun in the course of a year, the sun passing through one of them in a month. Their distance from each other was calculated at 30°; both these astronomic conquests are used in modern astronomy.

From the Persian time we know the names of famous Babylonian astronomers such as Nabû-rimannu of Babylon (c. 425) and Kidinnu of Sippar (c. 320). The latter distinguishes between the tropical and the sidereal year in his calculations. By the latter is meant the actual period of revolution of the earth, after the lapse of which it has returned to the point of its orbit where it was at the beginning of the year, and the sun again appears in the same position in relation to the same fixed stars. The sidereal year is 365 days, 6 hours, 9 minutes, and 9 seconds.

The tropical year is the time in which the earth moves from one equinoctial point through its orbit back to the same equinoctial point. By his separation of these two terrestrial years it will be seen that Kidinnu had discovered the precession, the annual motion of the equinoctial point through 50,264 arc seconds of the ecliptic from east to west, which makes the tropical year 20 minutes and 23 seconds shorter than the sidereal. Formerly it was held that it was Hipparchus of Nicaea (c. 190–125), the founder of scientific astronomy, who had found the precession on the basis of the list of stars he had made from his own observations.

To these extraordinary scientific results: the determination of solar and lunar eclipses, the 12 signs of the zodiac, and their mutually fixed distance, and Kidinnu's discovery of the precession, we must further add the use of the character 0, the cipher: the Babylonian mathematicians in the Seleucid era (312–122) used this in their calculations after the pattern of the astronomers. The definition of the figure 0 and its ensuing use marks an epoch in the history of the exact sciences; it is an exploit within these which in the cultural history of mankind can only be compared to the discovery of the agriculture and the fire. We connect Kidinnu or his school, though indeed without proof, with this remarkable scientific contribution, which was not ripe until after more than 2000 years' use of figures in astronomie-astrological calculations. But from Kidinnu's time it took 2223 years of scientific mathematical study before Bertrand Russell's logical definition of the figure 2, or of any other integer, independently of Gottlob Frege's from 1884, saw the light in 1903.

§ 6. In the mathematical branches of science the Babylonians attained noteworthy results, within algebra they even produced something extraordinary. In the treatment of equations of the second degree they advanced solutions which can only be compared to the method of Diophantus of Alexandria (c. 250 A.D.) who through the medium of two of the great men of modern mathematics, Fermat and Euler, has been of the greatest importance for the modern theory of numbers (Gauss, Kummer, and Dedekind). But further we may say in general that the arithmetic and geometric laws of the Babylonians are the precursors of the quantitative laws of modern science; for the Babylonians reduce to a generalised numerical form relations which have been

observed and measured between various kinds of objects in the external world. The use of the epoch-making character 0, on the other hand, was as we have seen, due to astronomy, and for good reasons it was not introduced into arithmetical problems until the Seleucid era, and thus did not affect Babylonian mathematics.

The latter originally had an exclusively practical purpose, a central point of which was calculations in the service of architecture and for ascertaining the superficial content of fields. All the damage caused by inundations necessitated a knowledge of the exact size of the plots of land, while purchase and sale, renting and farming out, conditions of inheritance and deeding by will made it of immediate interest to the parties to know the exact size of the areas. Not a few texts from the Agade Period and the Ur III Dynasty contain maps of fields inscribed with a record of their size, and this shows us that the Babylonian geometrician could approximately calculate the surface of triangles (rectangular as well as equilateral), trapezia, and polygons.

From preserved textbooks containing mathematical problems for solution, most of which can be dated to the Age of Hammurabi and the Kassite Dynasty, we see that the Babylonians worked seriously at complicated problems, and also that their special numerical system rendered difficult a quick manipulation with figures. The many advantages of the decimal system is realised by those who have occupied themselves with Babylonian mathematics. From the earliest times the Babylonians used the sexagesimal system which had been adopted from the Sumerians; the latter, however, as far back as the Jemdet Nasr Period, at the same time used notations that recall the decimal system for certain calculations, and this, we may suppose, is the reason why the sexagesimal system is crossed at some points by a line of thought which is rooted in the decimal system. I am here thinking of the unity ten; the Semitic immigrants, the Babylonians and Assyrians, evidently originally used the decimal system and nevertheless adopted the numerical system of the Sumerians, only creating special signs for 100 and 1000.

The units of the sexagesimal system are 1, 10, and 60 (Akk. *šuššu* = 6×10), 600 (Akk. *nêru* = 60×10) and 3600 (*šâru*, *sâru* = 60×60). By adding to a multiple of these units or their squares, any large number may be written: e.g. $36,621 = 10 \times 60^2 + 10 \times 60 + 2 \times 10 + 1$; large numbers may also be given in writing by

subtraction: $5987 = 10 \times 600 - 10 - 3 \times 1$. While our texts are poor in tables of addition and subtraction, numerous examples of multiplication have been transmitted as well as systematic tables of division; in them both the multiplicand and the dividend respectively are omitted, the latter being as a rule 60 or 3600. As an example of a complicated division we may give 24 divided by 9; the calculator takes the table of division which has the following appearance, 60 being the unit:

"(1ts) two-thirds ¹	40
its half	30
its $\frac{1}{3}$	20
its $\frac{1}{4}$	15
its $\frac{1}{5}$	12
its $\frac{1}{6}$	10
its $\frac{1}{8}$	7.30
its $\frac{1}{9}$	6.40
its $\frac{1}{10}$	6." ²

6.40 under the figure "its $\frac{1}{9}$ " is then multiplied by 24 thus: 24×40 and 24×6 , the results are found in the multiplication tables (0.16 and 2.24), keeping in mind that 6.40 has been produced by division of 60 by 9, and then 0.16 and 2.24 are added, by which the Babylonians get 2.40.

Thus it is seen that the Babylonians knew and operated with fractions; special cuneiform signs divisible by 6 are used for them: $\frac{1}{6}$, $\frac{2}{6}$, $\frac{3}{6}$, $\frac{4}{6}$, $\frac{5}{6}$, $\frac{1}{60}$, $\frac{1}{360}$, $\frac{1}{3600}$, whereas fractions with the numerator 1 are expressed as follows: *igi-4-gal*₂ = $\frac{1}{4}$; here *igi* originally meant "eye, countenance, front", *gal*₂ "to be", so that the expression denotes locatively "that which is in front or opposite 4", i. e., according to F. Thureau-Dangin³, the opposite of 4 or: $\frac{1}{4}$. But the Babylonians were likewise highly skilled in complicated arithmetical operations in which they used square numbers and cubes and were quite familiar with the extraction of roots, as has been discovered from a study of the above-mentioned textbooks.

¹ As seen from 40, "it" being = 60.

² H. V. Hilprecht, *Mathematical, Metrological, and Chronological Texts* ... (1906), No. 22 (*Bab. Exp.*, Series A: Cuneiform Texts, XX 1).

³ *Notes sur la mathématique babylonienne* (RA XXXIII 1936).

From the examples in these we see the general results of Babylonian mathematics, disregarding the solution of the many individual problems, which had a purely practical purpose. Thus the area of the circle $r \times \frac{1}{2} 2 \pi r$ was approximately determined by the Babylonians, r being the radius and $2 \pi r$ the periphery, where π denotes the constant relation between the diameter and the periphery, which are proportional, and is put $= 3$ by calculation. This of course is not accurate, we know that π with only 10 of the decimals is 3.1415926536, but it was a serviceable, approximately correct number. In plane geometry the Babylonians further, with an approximation of $\div 0.08$ or $+ 0.9$, were able to calculate the size of the diagonal in a rectangular square with a length of 40, and a height of 10 *ammalu* (Chapter XII § 3), and knew what was later called the Pythagorean theorem. In stereometry (spatial geometry) they could calculate the volumes of pyramids and truncated pyramids with complete accuracy.

Of great interest is an investigation of the algebraic knowledge of the Babylonians. They had mastered equations of the first, second, and third degree, with one unknown (x), and notably within the very complicated relations in equations of the second degree they showed eminent mathematical skill. We give some examples:

$$\begin{array}{lll} x_2 + bx = c & \text{solved thus } x = \sqrt{(b/2)^2 + c} \div b/2 \\ x_1 \div bx = c & \text{» » } x = \sqrt{(b/2)^2 + c} + b/2 \\ ax^2 + x = c & \text{» » } x = \frac{\sqrt{(1/2)^2 + ac} \div 1/2}{a} \\ ax^2 + bx = c & \text{» » } x = \frac{\sqrt{(b/2)^2 + ac} \div b/2}{a} \end{array}$$

The last two solutions imply these formulae

$$\begin{array}{l} a^2 x^2 + ax + (1/2)^2 = (1/2)^2 + ac \\ a^2 x^2 + abx + (b/2)^2 = (b/2)^2 + ac, \end{array}$$

where both the first terms are the squares of $ax + 1/2$ and $ax + b/2$ respectively. From the formulae it appears that the Babylonians solved the equations by multiplying with the coefficient of x^2 , a method also adopted by Diophantus, according to K. Vogel.¹

¹ *Osiris. Studies on the History and Philosophy of Science I* (1936), p. 714.

In the solution of a system of equations with two unknowns (x and y) they used partly the elimination method by substitution, partly another method which shall be briefly mentioned because Diophantus used the same and is perhaps indebted to the Babylonians. From the incontestable correctness of the following equation

$$\left. \begin{array}{l} a \\ b \end{array} \right\} = \frac{a+b}{2} \div \frac{a-b}{2}$$

the conclusion can be drawn that a system of equations with two unknowns can be solved if we know half the sum and half the difference of the two unknowns. The commonest form of the equations

$$\text{is either I. } \begin{array}{l} xy = a \\ x + y = b \end{array}$$

$$\text{or II. } \begin{array}{l} xy = a \\ x \div y = b \end{array}$$

the Babylonian solutions are

$$\begin{array}{l} \text{I. } \left. \begin{array}{l} x \\ y \end{array} \right\} = b/2 \div \sqrt{(b/2)^2 \div a} \\ \text{II. } \left. \begin{array}{l} x \\ y \end{array} \right\} = \sqrt{(b/2)^2 + a} \div b/2 \end{array}$$

If we call half the difference between x and y A , half their sum B , the genesis of the solution formulae may, according to F. Thureau-Dangin,¹ be supposed to be as follows

$$\begin{array}{l} \text{I. } x = b/2 + A \\ y = b/2 \div A \\ xy = (b/2)^2 \div A^2 = a \\ \text{where } A = \sqrt{(b/2)^2 \div a} \end{array}$$

$$\begin{array}{l} \text{II. } x = B + b/2 \\ y = B \div b/2 \\ xy = B^2 \div (b/2)^2 = a \\ \text{where } B = \sqrt{(b/2)^2 + a} \end{array}$$

¹ *Textes mathématiques babyloniens* (1938; *Uitgaven van het Vooraziatisch-Egyptische Gezelschap Ex Oriente Lux* I).

I think that all algebraists who have studied the great Pierre de Fermat's theory of numbers will follow with interest these slender beginnings of the higher algebra among the Babylonians.

§ 7. In the early times theoretical music was classed among the mathematical sciences. Of the character of the civilised Mesopotamian peoples' music we know nothing, no texts contain any accounts of the theory of music or are practical schools for those practising music. But we have numerous testimonies to the use of music in the service of the state as well as among private persons.

In the performance of the composite and comprehensive temple rites the recital of hymns and other religious texts played not only the part of an accompaniment, but also occupied an important place in the cult for the result of the action¹. In Chapter XIII § 4 we mentioned 3 classes of priests, whose duty it was to perform the vocal part of the ritual to an accompaniment of musical instruments. The Assyrian kings say that musicians (*nāru*, fem. *nārtu*) march at the head of the conquering king's procession into Nineveh, and private persons send for musicians and singers (*zammiru*, fem. *zammirtu*) at feasts and weddings; in the Sabitu fragment of the Gilgamesh Epic (p. 679) the wealthy man is invited to feast every day, to dance and rejoice. Gudea mentions a musician by the name(?) of Ušum-gal-kalamma² and his beloved (*ki-ag₂-ni*) *balag*, a sort of kettle-drum.³ The extensive finds of musical instruments in the tombs of the Shub-ad culture from the Ur I Dynasty afford evidence of the cultivation of music by the Sumerians, and the magnificent workmanship of the specimens testifies to their fondness for music.

It was produced by wind instruments, percussion instruments, and stringed instruments (e. g. TE.GU). The chief wind instrument was the flute; the single (*ebūbu*) as well as the double flute (*halḥallatu*) were known, perhaps *adapu* is also a sort of wind instrument; further a kind of long trumpet which with its one note probably served to give signals. Rhythm and sound were produced by instruments of percussion such as the kettle-drum, of which we have repre-

¹ From the excavations at Assur (VAT 10101: KAR I (1919), No. 158) a kind of catalogue of ritual texts is known, which contains the initial lines of a series of hymns. Inter alia to Ishlar and Tammuz.

² Cyl. B 18, 22 (SAK, p. 138).

³ Cyl. A 6, 24; 7, 24 (SAK, p. 96).

sentations, both of very large and of smaller transportable instruments, cymbals and tambourines (*labâlu*). Of stringed instruments we have a representation of a lute-like easily transportable instrument, but especially the two large harps and lyres from the above-mentioned Shub-ad culture. A relief from Lagash (the time of Gudea) shows us a large standing harp with 11 strings, whose form seems to be the result of a combination of the two different types found in the Royal Cemetery at Ur. It is difficult to keep the harp and the lyre distinct, as lyres may also be of a size that prevents them from being transported. The sounding-boxes are often decorated with small reliefs inlaid in mother-of-pearl or coloured stone mosaic and decorated on the front with an animal's head (bison, ox) covered with gold and lapis lazuli. A fine piece of workmanship is the boat-shaped silver lyre which was found in "the Great Death-pit" (PG 1237). It is carved in wood and covered with silver plates; beautiful also is the vivid and finely executed deer with antlers which on the front is cast in one with the uprights bearing the cross-bar with the strings. Sumerians and Assyrians—both were masters in the representation of animals, and the last impression from this chapter point back towards its beginning.

LITERATURE

The Assyriological literature after 1851 is extraordinarily extensive, comprising text editions, monographs, papers in periodicals, general surveys, and books of reference with linguistic and factual comments, as well as texts or selections of texts in European translation. Sumerian and Assyro-Babylonian culture, prehistory, history, language, writing, chronology, and religion, have been subjected to scientific researches pursued with enthusiasm, diligence and great conscientiousness for a hundred years. What the author of the present work has used of the most important scholarly literature will appear from the mention made thereof in the respective chapters and in their notes. But in addition we shall here finally take a brief reasoned survey of the main works in a kind of classified list.

1. GENERAL BIBLIOGRAPHY

For the period before 1914 the aids to Assyriological bibliography are imperfect, but Ernst Kuhn's *Literatur-Blatt für orientalische Philologie* (1884–88) and August Müller's (and Lucian Scherman's) *Orientalische Bibliographie* (1888–1922) may be consulted; Ch. Fossey, *L'Assyriologie de 1903 à 1907* (1907–09; reprinted from *J. As.* 10 sér., t. IV–XIV, 1904–09) only contains reviews of books which were published from 1903–07. But for the time after 1914 (omitting the period 1.8.1922–30.9.1925) Assyriological bibliography has found the greatest support, thanks to the splendid energy and indefatigable industry of Ernst F. Weidner in the following two works:

Ernst F. Weidner, *Die Assyriologie 1914–1922. Wissenschaftliche Forschungsergebnisse in bibliographischer Form. Abgeschlossen am 31. Juli 1922* (1922), and Ernst F. Weidner's bibliographical sections in the periodical edited by him *Archiv für Orientforschung* III ff. (1926 ff.),

which start on the 1.10.1925. Finally it may be mentioned that there is some bibliographical material in *Reallexikon der Assyriologie. Unter Mitwirkung zahlreicher Fachgelehrter* hrsg. v. Erich Ebeling und Bruno Meissner 1-11 (19(28)32-38), but the handbook is a fragment stopping at the word Ezur.

2. BIBLIOGRAPHIES OF TEXTS

A complete bibliography of Sumerian and Assyro-Babylonian independent text publications for the period 1849-1926 is found in Anton Deimel, *Übersicht über die Keilschrift-Literatur* (1927; *Orientalia* No. 27). - For the period 1926 ff.: the bibliographical sections in Ernst F. Weidner, *Archiv für Orientforschung* III ff. (1926 ff.), which also includes text publications in periodicals; A. Pohl and C. H. Gordon, *Orientalia* N. S. 9 ff. (1940 ff.).

For texts published in periodicals prior to 1914 when, as we have noted in the General Bibliography, Weidner's bibliographical initiative starts, we have no bibliographical aids, but we can with great profit use two learned works by Carl Bezold: *Kurzgefasster Überblick über die babylonisch-assyrische Literatur . . .* (1886) and *Catalogue of the Cuneiform Tablets in the Kouyunjik Collection of the British Museum* (1889-99, 5 vols.-Supplement by L. W. King 1914), which together register all text publications from 1849-99 of cuneiform texts in English or French public possession.

3. LANDSCAPE

All important travel accounts, from that of Benjamin of Tudela (12th cent.) published in Latin in 1575 to the time around the beginning of the great excavations in 1842 are mentioned in Chapter II. They have all furnished contributions to my impressions which were supplemented by personal inspection on a research journey to Iraq in the winter of 1951.- Of valuable later travel books may be mentioned: Eduard Sachau, *Am Euphrat und Tigris. Reisenotizen aus dem Winter 1897-1898* (1900); Sven Hedin, *Baghdad, Babylon, Ninive* (1918); E. A. Wallis Budge, *By Nile and Tigris* (1920, 2 vols.).

4. GEOGRAPHY

Of the ancient geography of Mesopotamia we lack an elaborate scientific study; both the works mentioned below are greatly out of date on account of later discovered text material: Friedrich Delitzsch, *Wo lag das Paradis?* . . . (1881); Fritz Hommel, *Ethnologie und Geographie des alten Orients* (1926), pp. 241–514, 1013–1030 (*Handbuch der Altertumswissenschaft* begründet von Iwan von Müller, in neuer Bearbeitung von Walter Otto. III. Abteil. 1. Teil, 1. Bd.). At that time Delitzsch was only acquainted with the 62-lined geographical list in IV R 38–39 (1875) and small text fragments such as K. 4312, K. 4337, K. 4415, K. 4344 and those published in II R 50–53 (1866). And the Mesopotamian section of Hommel's great work was written before 1908. – A useful list of geographical names, see the R. P. Boudou, *Orientalia* Num. 36–38 (1929).

Of important additional text material as yet partly untreated may be mentioned the following four geographical lists: the Nippur List (University Museum of Pennsylvania), see Edward Chiera, *Sumerian Lexical Texts from the Temple School of Nippur* (1929; *OIP* XI); the Larsa List (Louvre), see Charles-F. Jean, *RA* XXXII (1935); the Ur III List (Ashmolean Museum, Oxford), of unknown provenance, see P. Van der Meer, *Oxford Editions of Cuneiform Texts* IV (1938); and the Har-mal List (Iraqi Museum, Baghdad), see Selim J. Levy, *Sumer* III 2 (1947).

5. EARLY EXPLORATIONS

We refer the reader to Chapter II where all the principal works are mentioned.

6. DECIPHERMENT OF THE CUNEIFORM INSCRIPTIONS

The reader is referred to Chapter III, where mention is made of all important publications. But I shall here refer to two important works to which I am indebted, and in which the exciting story of the decipherment is given. These are Arthur John Booth, *The Discovery and Decipherment of the Trilingual Cuneiform Inscriptions* (1902), and Charles Fossey, *Manuel d'Assyriologie* . . . I (1904). With some caution one may also use Sir Ernest Budge, *The Rise and Progress of Assyriology* (1925), which is marred by misprints both as regards dates, years and facts.

7. THE CUNEIFORM SCRIPT

For all important works see Chapter IV.

8. THE LANGUAGES

No work of importance has, I hope, been left unmentioned in Chapters III, IV, and V.—As to the old Mesopotamian philological literature, the scholastic texts (syllabaries, vocabularies, grammatical and lexical lists, etc.), the reader is referred to Chapter XIV Section 3.

9. THE EXCAVATIONS 1842–1954

As to the publications dealing with the excavations the reader is referred to the extensive bibliography in Chapter VI Section C.

With regard to the history of the excavations from the first decade we may mention: M. Pillet, *Khorsabad. Les découvertes de Victor Place en Assyrie* (1918; offprint of *RArch.* V. sér., tome 4, 6, 7, 8 (1916–18)), and especially C. J. Gadd, *The Stones of Assyria* . . . (1936), which as far as the English excavations are concerned is supplemented by R. Campbell Thompson and R. C. Hutchinson, *A Century of Exploration at Nineveh* (1929), and Seton Lloyd, *Foundations in the Dust* (1947, 2nd 1949).

The history of the excavations from 1842 till the year of publication of the works mentioned below has been given by: H. V. Hilprecht, *The Excavations in Assyria and Babylonia* (1904; *The Babylonian Expedition of the University of Pennsylvania*, Series D: Vol. 1); Robert William Rogers, *A History of Babylonia and Assyria* ¹: Prolegomena (1915) and most thoroughly especially by André Parrot, *Archéologie mésopotamienne* (1:) *Les étapes* (1946).

A summary estimation of the results of the Mesopotamian excavations has been attempted on a large scale from several quarters during the last 15 years (on earlier attempts see Chapter VII). Thus:

Viktor Christian, *Alttertumskunde des Zweistromlandes von der Vorzeit bis zum Ende der Achämenidenherrschaft* I (1940, 2 vols.).

Georges Contenau, *Manuel d'archéologie orientale* IV: *Les découvertes archéologiques de 1930 à 1939* (1947).

Ann Louise Perkins, *The Comparative Archeology of Early Mesopotamia* (1949; SAOC No. 25).

V. Gordon Childe, *New Light from the Most Ancient East* (1952; 1. ed. 1928).

André Parrot, *Archéologie mésopotamienne* (II:) *Technique et Problèmes* (1953), pp. 105–331.

The force of the two first-mentioned works is somewhat diminished by the fact that they only go to the year 1939; and further, Christian's work is merely a torso which only goes as far as the Ur III Dynasty and has become obsolete in its evaluation of the pottery owing to the finding of new material as a result of the excavations in the period 1940–1954. Miss Perkins' thorough and conscientious work can as yet only be regarded as a temporary scientific survey of a material whose earliest parts are hardly ten years old. This also applies to the works of Childe and Parrot which are eminent surveys and estimates of Mesopotamian interrelations. Childe covers the region from the Mediterranean to the Indus valley while Parrot especially penetrates into the relations with Iran. Most important papers, contributing to the interrelations of Mesopotamian archaeology, are due to Dorothy A. E. Garrod (*Proceedings of the Prehistoric Society* N. S. IV (1938)); M. E. L. Mallowan (*Iraq* IX, 1947; *Sumer* V 1, 1949), and Robert J. Braidwood (*JNES* XI 1952; *The Near East and the Foundations for Civilization* (Condon Lectures 1952); *Journal of World History* I 1953).

The following publications have been used directly or indirectly in Chapter VII, partly as an aid to the understanding of the interrelations of the Mesopotamian prehistoric cultures, partly to give some insight into the archaeological results in the region from the Mediterranean to the Indus valley:

ALALAH

Sir Leonard Woolley, *A Forgotten Kingdom . . .* (1953).

THE 'AMUQ AREA

R. J. Braidwood, *Mounds in the Plain of Antioch* (1937; *OIP* XLVIII).

R. J. Braidwood and Linda Braidwood, *Excavations in the Plain of Antioch* I (*OIP* LXI). [In preparation.]

ANAU

Raphael Pumpelly, *Explorations in Turkestan. Expedition of 1904. Prehistoric Civilizations of Anau I-II* (1908; *Carnegie Inst. of Wash. Publ. No. 73*).

ASIA MINOR

- J. L. Myres, *The Early Pot-fabrics of Asia Minor* (*JAI* XXXIII, 1903).
 H. H. von der Osten and E. F. Schmidt, *The Alishar Hüyük, Season of 1927 - Seasons of 1928-32* (1930-37; *OIP* VI, VII, XIX-XX, XXVIII-XXX).
 K. Bittel, *Prähistorische Forschung in Kleinasien* (1934; *Istanbuler Forschungen* VI).
 Winifred Lamb, *Archaeologia* 86-87 (1937-38): Kusura.
 John Garstang, *AAA* 25 (1938), pp. 71-110; 26 (1939-40), pp. 38-72, 89-158: Mersin (Yümük Tepe).
 John L. Myres, *Recent Archaeological Discoveries in Asia Minor* (*Iraq* VI, 1939).
 Hetty Goldman and John Garstang, *A Conspectus of early Cilician Pottery* (*AAA* 51 (1947), pp. 370-88).
 K. Bittel und R. Naumann, *Boğazköy-Hattuša. Ergebnisse der Ausgrabungen . . . 1931-39 I* (1952; *WVDOG* 63).
 Carl W. Blegen, *et al.*, *Troy. Excavations conducted by the University of Cincinnati 1932-38 I-III* (1950-53, 5 vols.).
 J. Garstang, *Prehistoric Mersin, Yümük Tepe in Southern Turkey. The Neilson Expedition in Cilicia* (1953).
 M. E. L. Mallowan, Review of J. Garstang, *Prehistoric Mersin* (1953) (*Antiquity* XXVIII (1954), pp. 49-54).
 Seton Lloyd, *Early Anatolia . . .* (1956).

BAGHOUZ

- R. J. Braidwood, *et al.*, *JNES* III (1944), pp. 48-72.
 R. du Mesnil du Buisson, *Baghouz . . .* (1948; *Documenta et Monumenta Orientis Antiqui* III).

THE BALIH VALLEY

- M. E. L. Mallowan, *Excavations in the Balih Valley, 1938* (*Iraq* VIII, 1946).

BALUCHISTAN

- H. Hargreaves, *Excavations in Baluchistan* (1929; *Mem. Arch. Surv. of India* 35).

Aurel Stein, *An Archaeological Tour in Waziristān and Northern Balū-chistān* (1929; *Mem. Arch. Surv. of India* 37).

BRAK

M. E. L. Mallowan, *Excavations at Brak and Chagar Bazar (Iraq IX, 1947)*.

BYBLOS

Maurice Dunand, *Fouilles de Byblos* (1939); *Bull. Musée Beyrouth* 1949-50, pp. 53-74.

CARCHEMISH

D. G. Hogarth and C. L. Woolley, *Carchemish I-II* (1914-21).

C. L. Woolley, *The Prehistoric Pottery of Carchemish (Iraq I, 1934)*.

Sir Leonard Woolley and R. D. Barnett, *Carchemish III* (1952).

CHAGAR BAZAR

M. E. L. Mallowan, *The Excavations at Tall Chagar Bazar . . . (I-II) (Iraq III, IV 1936-37)*.

M. E. L. Mallowan, *Excavations at Brak and Chagar Bazar (Iraq IX 1947)*.

CHINA

Aurel Stein, *On Ancient Central-Asian Tracks. Brief Narrative of three Expeditions in Innermost Asia and North-Western China* (1933).

G. D. Wu, *Prehistoric Pottery in China* (1938).

CYPRUS

Claude F.-A. Schaeffer, *Missions en Chypre, 1932-1935* (1936).

P. Dikaïos, *New Light on Prehistoric Cyprus (Iraq VII 1940)*; *Ill. London News* 5.9.1953.

Claude F.-A. Schaeffer, *Enkomi-Alasia. Nouvelles missions en Chypre 1946-1950* (1952).

Porphyrîos Dikaïos, *Khirokitia. Final Report on the Excavations of a Neolithic Settlement in Cyprus . . . 1936-1946* (1953).

EGYPT

K. S. Sandford and W. J. Arkell, *Palaeolithic Man and the Nile I-III* (1930-39).

G. Caton-Thompson and E. W. Gardner, *The Desert Fayum I-II* (1934).

- Flinders Petrie, *The Making of Egypt* (1939).
 Elise J. Baumgartel, *The Cultures of Prehistoric Egypt* (1947).
 F. Debono, *Annales du Service XLVIII* (1948): El Omari, Helwan.
 G. Caton-Thompson, *Kharga Oasis in Prehistory* (1952).

HALAF

- Max von Oppenheim, *Der Tell Halaf. Eine neue Kultur im ältesten Mesopotamien* (1931).
 Max von Oppenheim, *Tell Halaf I: Die prähistorischen Funde bearb. von Hubert Schmidt* (1943); II and III (1950 and 1955).

HAMA

- H. Ingholt, *Rapport préliminaire sur sept campagnes de fouilles à Hama en Syrie* (1940).
 Hama. *Fouilles et recherches de la Fondation Carlsberg 1931-1938* (1948 ff.; *Nationalmuseets Skrifter*. Storre Beretninger I ff.).

INDUS VALLEY

- J. Marshall, *et al.*, *Mohenjo-daro and the Indus Civilization* (1932; *Mohenjo-daro I*).
 Ernest Mackay, *Further Excavations at Mohenjo-daro* (1938; *Mohenjo-daro II*).
 M. S. Vats, *Excavations at Harappa* (1940).
 Ernest Mackay, *Chanhudaro Excavations 1935-6* (1943).
 Stuart Piggott, *Prehistoric India* (1950).
 Sir Mortimer Wheeler, *The Indus Civilization* (1953).

IRAN

- A. M. Dieulafoy, *L'Acropole de Suse* (1890-92).
 Jacques de Morgan, *Délégation en Perse. Mémoires I* (1900; Appendice N° I: Céramique archaïque).
 J. E. Gautier et G. Lampre, *Fouilles de Moussian* (1905; *Dél. en Perse. Mém. VIII*).
 Edm. Pottier, J. de Morgan et R. de Meequenem, *Céramique peinte de Suse . . .* (1912; *Dél. en Perse. Mém. XIII*).
 Edmond Pottier, *Étude historique et chronologique sur les vases peints de l'acropole de Suse* (1912; *Dél. en Perse. Mém. XIII*).

- Maurice Pézard, *Mission à Bender-Bouchir* (1914; *Mission archéol. de Perse. Public. XV*).
- R. de Mecquenem, *Notes sur la céramique peinte archaïque en Perse* (1928; *Dél. en Perse. Mém. XX*).
- Aurel Stein, *An Archaeological Tour in Gedrosia* (1931; *Mem. Archaeol. Surv. of India 43*).
- Ernst Herzfeld, *Steinzettellicher Hügel bei Persepolis* (1932; *Iran Denkm. I A*).
- Ernst Herzfeld, *Niphauanda* (1933; *Iran Denkm. I B*).
- Roland de Mecquenem, *Fouilles de Suse 1929-33* (1934; *Miss. archéol. de Perse. Mém. XXV*).
- A. Langsdorff, *Eine prähistorische Siedlung bei Persepolis* (1934).
- Georges Contenau et Roman Ghirshman, *Fouilles du Tépé-Giyan, près de Néhavend, 1931 et 1932* (1935).
- Aurel Stein, *An Archaeological Tour in the Ancient Persis* (*Iraq III*, 1936).
- Aurel Stein, *Archaeological Reconnaissances in North-Western India and South-Eastern Irān* (1937).
- Erich F. Schmidt, *Excavations at Tepe Hissar, Damghan* (1937).
- Roman Ghirshman, *Fouilles de Sialk, près de Kashan 1933, 1934, 1937 I-II* (1938-39).
- A. Langsdorff and Donald E. McCown, *Tall-i- Bakun A, Season of 1932* (1942; *OIP LIX*).
- Donald E. McCown, *The Comparative Stratigraphy of Early Iran* (1942; *SAOC No. 23*).
- R. de Mecquenem, G. Contenau, et al., *Archéologie susienne* (1943; *Mém. de la Miss. archéol. en Iran XXIX*).
- T. J. Arne, *Excavations at Shah Tepe* (1945).
- T. Burton Brown, *Excavations in Azarbaijan, 1948* (1951); *Geoy Tepe*.
- Carleton S. Coon, *Cave Exploration in Iran, 1949* (1951).
- R. Ghirshman, *Travaux de la mission archéologique en Susiane en hiver 1952-53* (*Syria XXX*, 1953).
- R. Ghirshman, *Ill. London News* 8.8.1953: Choga-Zambil near Susa.
- R. Ghirshman, *Iran from the Earliest Times to the Islamic Conquest* (1954).

KSĀR 'AKIL

- J. F. Ewing, *Antiquity XXI* (1947).
- R. J. Braidwood, *JNES X* (1951).

MARI

André Parrot, *Les fouilles de Mari* 1.-6. campagne (*Syria* XVI-XXI, 1935-40); *Mari, une ville perdue* (1936, ²1938, ³1945); *Ill. London News* 31.10.1953, 14.8. 1954: 8.-9. Season; *Syria* XXX (1953).

PALESTINE

- John Garstang, *Jericho* 1.-6. Report (AAA 19-23, 1932-36).
 F. Turville-Petre, *JAI* LXII (1932): Mugharet el-Kebarah.
 Dorothy A. E. Garrod and Dorothea M. A. Bate, *The Stone Age of Mount Carmel* I-II (1937-39).
 G. Ernest Wright, *The Pottery of Palestine . . .* (1937).
 J. Waechter, *JPOS* XVIII (1938): Wādi Dhobai.
 R. S. Lamon and Geoffrey M. Shipton, *Megiddo* I (1939): Strata I-V;
 Gordon Loud, *Megiddo* II (1948): Strata VI-XX (*OIP* XLII, LXII).
 Geoffrey M. Shipton, *Notes on the Megiddo Pottery of Megiddo Strata VI-XX* (1939; SAOC No. 17).
 John Garstang, *The Story of Jericho* (1940).
 Dorothy A. E. Garrod and Dorothea M. A. Bate, *Proceedings of the Pre-historic Society* VIII (1942): Shukbah.
 W. F. Albright, *The Archeology of Palestine* (1949).
 René Neuville, *Le Paléolithique et le Mésolithique du Désert de Judée* (1951; *Archiv d. l'Inst. Paléontol. Hum., Mém.* 24): El Khiam (by Jean Perrot).
 Jean Perrot, *Syria* XXIX (1952): Abū Gosh.
 M. Stekelis and G. Haas, *Israel Exploration Journal* II (1952): Abū Usba Cave, Mount Carmel.
 A. Douglas Tushingham, *The Joint Excavations at Tell es-Sultan (Jericho)* (*BASOR* 127, 1952).
 Kathleen M. Kenyon, *Antiquity* XXVI (1952); *Ill. London News* 18.4, 3.10, 17.10.1953; 24.7.1954: Jericho.
 Kathleen M. Kenyon, *et al.*, *Tell es-Sultān* 1.-2. Camp. (1952-53): Jericho. [In preparation].

RAS SHAMRA

Claude F.-A. Schaeffer, *Les fouilles de Ras Shamra* I. à XVII. campagnes (*Syria* X (1929); XII-XX (1931-1939); XXVIII (1951); XXXI (1954)); as for Levels V and IV, see *Syria* XVI (1935) and Schaeffer's *Ugaritica* I (1939).

SAKJE GEUZI

John Garstang, *et al.*, *Excavations at Sakje-Geuzi in North Syria* (AAA I 1908, V 1913, XXIV 1937).

J. du Plat Taylor, M. V. Seton Williams, J. Waechter, *The Excavations at Sakce Gözü (Iraq XII, 1950)*.

TABBAT AL-HAMMAM

R. J. Braidwood and Linda Braidwood, *Syria* XXI (1940).

TELL AḤMAR

Fr. Thureau-Dangin et Maurice Dunand, *Til-Barsib* (1936).

YABRUD

A. Rust, *Die Höhlenfunde von Jabrud* (1950).

10. CHRONOLOGY

For an historical account of the researches on Sumerian and Assyro-Babylonian chronology during the period 1884–1939, see Svend Aage Pallis, *Chronology of the Shub-ad Culture* (1941), pp. 235–324, which account is supplemented, for the period after 1939, by André Parrot, *Archéologie mésopotamienne* (II) (1953), pp. 332–445.

For the results achieved in the period from 1939 onward I refer the reader to Chapter VIII. I still consider Sidney Smith's *Alalakh and Chronology* (1940) the main work as regards the chronology of the Hammurabi Dynasty, but I do not disagree with Benno Landsberger (*JCS* VIII (1954), pp. 31–45, 47–73, 106–133), when he points out that after taking a general view of all the sources now accessible the difficulties are very great, so that no one can set forth a perfectly reliable Hammurabi chronology.

With respect to the time prior to the Hammurabi Dynasty I call attention to the fact that the chronology applied in the present work is based on the considerations and calculations set forth in my *Chronology of the Shub-ad Culture* (1941), pp. 324–438, taking due account of the Hammurabi date recently fixed by Sidney Smith.

As to the Assyro-Babylonian chronology, concerning the time after the Hammurabi Dynasty the reader is referred to the above-mentioned works of Pallis and Parrot and further to E. Sollberger, *AOF* XVII 1 (1954):

Ur III; A. Poebel, *AS* No. 15: Isin II; Hillel A. Fine, *Studies in Middle-Assyrian Chronology*... (1955); and above p. 30².

Of important works treating non-Mesopotamian chronological problems not without interest for Mesopotamian prehistory and history we may mention: Claude F. A. Schaeffer, *Stratigraphie Comparée et Chronologie de l'Asie Occidentale (III^e et II^e millénaires)* (1948) and Frederick E. Zeuner, *Dating the Past. An Introduction to Geochronology* (²1952).

11. HISTORY

In Chapters IX–XI an attempt has been made to give an account of Mesopotamian history on the basis of the latest excavations, published texts, and observations. As regards earlier accounts the reader is referred to:

Eduard Meyer, *Geschichte des Altertums*. 2. Aufl. I 2 (1909).

Leonard W. King, *A History of Sumer and Akkad* ... (1910, ²1916).

Leonard W. King, *A History of Babylon* ... (1919).

A. T. Olmstead, *History of Assyria* (1923).

C. J. Gadd, *The Fall of Nineveh* (1923).

Stephen H. Langdon, R. Campbell Thompson, Sidney Smith in *CAH* I–III (1923–25).

Sidney Smith, *Early History of Assyria to 1000 B.C.* (1928).

C. J. Gadd, *History and Monuments of Ur* (1929).

A. Götze, *Hethiter, Churriter und Assyrer* ... (1936).

Louis Delaporte, *Les peuples de l'Orient méditerranéen* I. La Proche-Orient asiatique (1938; "Clio". *Introduction aux études historiques* 1).

Thorkild Jacobsen, *The Sumerian King List* (1939; *AS* No. 11).

A. Goetze, *Kizzuwatna and the Problem of Hittite Geography* (1940; *Yale Or. Ser. Researches* Vol. 22).

Bedřich Hrozný, *Die älteste Geschichte Vorderasiens und Indiens* (1943).

Ignace J. Gelb, *Hurrians and Subarians* (1944; *SAOC* No. 22).

Maurice Lambert, *La période présargonique. Essay d'une histoire sumérienne* (*Sumer* VIII ff. 1952 ff.).

12. CULTURE

The now more than thirty years old, but still unrivalled account of Bruno Meissner, *Babylonien und Assyrien* (1920–25, 2 vols.; *Kul-*

turgeschichtliche Bibliothek 1 3-4) is best supplemented by works by Georges Contenau, e.g. *La vie quotidienne à Babylone et en Assyrie* (1950) and *La civilisation d'Assur et de Babylone* (Nouv. ed. refond. 1951).

In writing Chapters IX-XII I have found support in the following text editions:

R. F. Harper, *Assyrian and Babylonian Letters . . .* I-XIII (1892-1913); translation by Leroy Waterman (1930-36), see below (Section 18).

C. H. W. Johns, *Assyrian Deeds and Documents* I-IV (1898-1923).

M. F. Allotte de la Fuÿe, *Documents présargoniques* (1908-20).

H. de Genouillac, *Tablettes sumériens archaïques* (1909).

A. Poebel, *Babylonian Legal and Business Documents from the Time of the First Dynasty of Babylon . . .* (1909; *Bab. Exp. of the Univ. of Pennsylvania* A VI 2).

Ed. Chiera, *Legal and Administrative Documents from Nippur, chiefly from the Dynasties of Isin and Larsa* (1914; *PBS* VIII 1).

G. A. Barton, *Sumerian Business and Administrative Documents from the Earliest Times to the Dynasty of Agade* (1915).

W. Förtsch, *Altbabylonische Wirtschaftstexte aus der Zeit Lugalandas und Urukaginas* (1916; *VS* XIV).

J. B. Nies, *Ur Dynasty Tablets . . .* (1920; *AB* XXV).

M. San Nicolò und A. Ungnad, *Neubabylonische Rechts- und Verwaltungsurkunden* (1929-35).

A. Pohl, *Neubabylonische Rechtsurkunden* (1933-34; *An. Or.* 8-9).

And in the following monographs:

Walter Schwenzner, *Zum altbabylonischen Wirtschaftsleben . . .* (1915; *MVAG* XIX 3).

Walter Reimpell, *Geschichte der babylonischen und assyrischen Kleidung* (1921).

13. RELIGION

Often text editions as well as individual texts dealing with religion are furnished with religio-historical expositions (see also below under Translations). Special papers and monographs treating Sumerian or Assyro-Babylonian religion in general, or merely particular aspects of it, often in particular periods, have appeared in vast numbers since 1851, but below I cite in chronological order the works which

I consider most important (cp. also below Section 18: 'Translations 4. and 5.). That the earliest of them are strongly marked by the ravages of time cannot be denied, nor that many of them are books of reference not now read as a whole. No real history of Mesopotamian religion has as yet been published. The nearest approach to the solution of this task we have in Dhorme's and Jean's works in the old style, Thorkild Jacobsen's in the new style.

Peter Jensen, *Die Kosmologie der Babylonier* . . . (1890).

Heinrich Zimmern, *Überblick über die babylonische Religion* . . . (Eberh. Schrader, *Die Keilinschriften und das Alte Testament*. 3. Aufl. (1903), pp. 347-643).

Julian Morgenstern, *The Doctrine of Sin in the Babylonian Religion* (1905; MVAG X).

A. Boissier, *Choix de textes relatifs à la divination assyro-babylonienne* (1905-06; 2 vols.)

Morris Jastrow, jr., *Die Religion Babyloniens und Assyriens I-II 1-2* (1905-12; 3 vols.).

E. Behrens, *Assyrisch-babylonische Briefe kultischen Inhalts* (1906; LSSl II 1).

W. Schrank, *Babylonische Sühnriten* . . . (1908; LSSl III 1).

[Paul Édouard] Dhorme, *La religion assyro-babylonienne* (1910).

C. Frank, *Studien zur babylonischen Religion I* (1911).

Th. Paffrath, *Zur Götterlehre in den babylonischen Königsinschriften* (1913; *Studien zur Gesch. u. Kult. d. Altertums* VI 5-6).

Stephen Langdon, *Tammuz and Ishtar* (1914).

Antonius Deimel, *Pantheon babylonicum* . . . (1914).

Benno Landsberger, *Der kultische Kalender der Babylonier und Assyrier* (1915; LSSl VI 1-2).

E. Ebeling, *Quellen zur Kenntnis der babylonischen Religion* (1918-19, 2 vols.; MVAG XXIII).

F. Thureau-Dangiu, *Rituels accadiens* (1921).

Stephen Langdon, *Babylonian Wisdom* . . . (1923).

Karl Vold, *Den babylonisk-assyriske Religion* (1925).

Svend Aage Pallis, *The Babylonian akītu Festival* (1926; *Det kongelige danske Videnskabernes Selskab. Hist.-filol. Medd.* XII 1).

Giuseppe Furlani, *La religione babilonese e assira* (1928-29, 2 vols.; *Storia delle religioni* VI e IX).

- E. Ebeling, *Tod und Leben nach den Vorstellungen der Babylonier I* (1931).
- Charles-F. Jean, *La religion sumérienne . . .* (1931).
- Ad. Falkenstein, *Die Haupttypen der sumerischen Beschwörung . . .* (1931; *LSSl* N.F. 1).
- W. G. Kunstmann, *Die babylonische Gebetsbeschwörung* (1932; *LSSl* N.F. 2).
- Knut Tallqvist, *Der assyrische Gott* (1932; *Studia Orientalia* ed. Soc. Orient. Fennica IV 2).
- Maurus Witzel, *Tammuz-Liturgien und verwandtes* (1935; *An. Or.* 10).
- K. F. Müller, *Das assyrische Ritual I* (1937; *MVAG* XLI 3).
- Geo Widengren, *The Accadian and Hebrew Psalms of Lamentation as Religious Documents* (1937).
- Knut Tallqvist, *Akkadische Götterepitheta . . .* (1938; *Studia Orientalia* . . . VII).
- René Labat, *Le caractère religieux de la royauté assyro-babylonienne* (1939; *Études d'Assyriologie* III).
- Georges Contenau, *La divination chez les Assyriens et les Babyloniens* (1940).
- W. F. Albright, *From Stone Age to Christianity* (1940).
- E. Douglas Van Buren, *The Sacred Marriage in Early Times in Mesopotamia* (*Orientalia* N.S. 13, 1944).
- S. N. Kramer, *Sumerian Mythology . . .* (1944).
- Édouard Dhorme, *Les religions de Babylone et d'Assyrie* (1945; "Mana". *Introduction à l'histoire des religions* 1).
- Thorkild Jacobsen, *Mesopotamia* (Henri Frankfort, et al., *The Intellectual Adventure of Ancient Man* (1946), pp. 123–219; new ed. with the title: *Before Philosophy* (1949, 21951), pp. 135–234).
- Georges Contenau, *La magie chez les Assyriens et les Babyloniens* (1947).
- C. J. Gadd, *Ideas of Divine Rule in the Ancient East* (1948; The Schweich Lectures 1945).
- Henri Frankfort, *Kingship and the Gods* (1948).
- A. Moortgat, *Tammuz. Der Unsterblichkeitsglaube in der altorientalischen Bildkunst* (1949).
- Ancient Religions. Originally published as Forgotten Religions.* Ed. by V. Ferm (1950): S. N. Kramer, *Sumerian Religion*; A. Leo Oppenheim, *Assyro-Babylonian Religion*.
- René Labat, *Un calendrier cassite de jours fastes et néfastes* (*Sumer* VIII 1, 1952).

- Jean Bottéro, *La religion babylonienne* (1952).
 S. H. Hooke, *Babylonian and Assyrian Religion* (1953).
 E. Ebeling, *Beiträge zur Kenntnis der Beschwörungsserie Namburbi* (RA XLVIII f., 1954 f.).
 R. Frankena, *Tākkultu. De sacrale mualtijd in het Assyrische ritueel* (1954).

14. ART

- William Hayes Ward, *The Seal Cylinders of Western Asia* (1910).
 Bruno Meissner, *Grundzüge der babylonisch-assyrischen Plastik* (1914; *Der Alte Orient* 15).
 Otto Weber, *Allorientalische Siegelbilder* (1920; *Der Alte Orient* 17–18).
 W. Andrae, *Farbige Keramik aus Assur* (1923).
 Léon Legrain, *The Culture of the Babylonians from their Seals in the Collections of the Museum* (1925, 2 vols.; PSB XIV).
 Georges Contenau, *Manuel d'archéologie orientale* (1927–47, 4 vols.).
 C. Leonard Woolley, *The Development of Sumerian Art* (1935).
 Anton Moortgat, *Frühe Bildkunst in Sumer* (1935; MVAG XL 3).
 Christian Zervos, *L'art de la Mésopotamie...* (1935).
 Henri Frankfort, *Cylinder Seals. A Documentary Essay on the Art and Religion of the Ancient Near East* (1939).
 Anton Moortgat, *Vorderasiatische Rollsiegel...* (1940; *Staatliche Museen zu Berlin*).
 H. J. Lenzen, *Die Entwicklung der Zikkurat...* (1941; *Ausgrabungen...* in *Uruk-Warka*. Bd. 4).
 André Parrot, *Ziggurats et Tour de Babel* (1949).
 E. Heinrich, *Die Stellung der Uruktempel in der Baugeschichte* (ZA XLIX (1950), pp. 21–44).
 H. Frankfort, *The Art and Architecture of the Ancient Orient* (1954).

15. LITERATURE

- Carl Bezold, *Kurzgefasster Überblick über die babylonisch-assyrische Literatur...* (1886).
 Otto Weber, *Die Literatur der Babylonier und Assyrier* (1907; *Der Alte Orient*, 2. Ergänzungsbd.).
 Charles-F. Jean, *La littérature des Babyloniens et des Assyriens* (1924).
 Bruno Meissner, *Die babylonisch-assyrische Literatur* (1927; *Handbuch d. Literaturwissenschaft*).
 É. Dhorme, *La littérature babylonienne et assyrienne* (1937).

Adam Falkenstein, *Zur Chronologie der sumerischen Literatur. Die nach-babylonische Stufe* (MDOG 85 (1953), pp. 1-13).

Wolfram von Soden, *Das Problem zeitlicher Einordnung akkadischer Literaturwerke* (MDOG 85 (1953), pp. 14-26).

16. SCIENCES

M. Weitemeyer, *Babylonske og assyriske Arkiver og Biblioteker* (1955).

H. S. Schuster, *Die nach Zeichen geordneten sumerisch-akkadischen Vokabulare* (ZA N.F. X (1938), pp. 217-70).

Fr. Delitzsch, *Assyrische Studien. Heft 1: Assyrische Thiernamen . . .* (1874).

B. Landsberger, *Die Fauna des Alten Mesopotamien . . .* (1934; Abhl. d. K. Sächs. Ak. d. Wiss., phil.-hist. Kl. XLII 6).

H. A. Potratz, *Das Pferd in der Frühzeit* (1939) and AOF XIV (1941-44), pp. 1-39.

Max Hilzheimer, *Animal Remains from Tell Asmar* (1941; SAOC No. 20).

E. Bonavia, *The Flora of the Assyrian Monuments* (1894).

R. Campbell Thompson, *A Dictionary of Assyrian Botany* (1949).

F. Küchler, *Beiträge zur Kenntnis der assyrisch-babylonischen Medizin* (1904; AB XVIII).

E. Ebeling, *Archiv für Geschichte der Medizin* XIII (1921).

R. Campbell Thompson, *Assyrian Medical Texts . . .* (1923) and *The Assyrian Herbal: The Assyrian Vegetable Drugs* (1924).

Georges Contenau, *La médecine en Assyrie et en Babylonie* (1938; *La médecine à travers le temps . . .* II).

R. Labat, *Un traité médical akkadien* (RA XL, 1945-46).

R. Labat, *Traité akkadien de diagnostics et pronostics médicaux* (1951).

S. N. Kramer and Martin Levey, Ill. *London News* 26.2. 1955.

R. Campbell Thompson, *On the Chemistry of the Ancient Assyrians* (1925) and *A Dictionary of Assyrian Chemistry and Geology* (1936).

J. Epping, *Astronomisches aus Babylon* (1889; *Stimmen aus Maria-Laach*, Ergänzungsheft No. 44).

Ch. Virolleaud, *L'astrologie chaldéenne* (1905-12).

- Franz Xaver Kugler, *Sternkunde und Sterndienst in Babel* I-II 1-2 (1907-14), *Ergänzungen* 1-2 (1913-14), 3 (1935).
- Ernst F. Weidner, *Handbuch der babylonischen Astronomie* I (1915; AB XXIII).
- O. Neugebauer, *The History of Ancient Astronomy*, pp. 8-16 (JNES IV (1945), pp. 1-38).
- François Thureau-Dangin, *Notes sur la mathématique babylonienne* (RA XXIII, 1936), *Observations sur l'algèbre babylonienne* (Archeion XIX, 1937), and *Textes mathématiques babyloniens* (1938).
- O. Neugebauer, *Mathematische Keilschrifttexte* (1935-38) and *The Exact Sciences in Antiquity* (1951).
- The Tell Abû Harmal mathematical texts see *Sumier* VI-XI (1950-55: Taha Baqir, Fr. Drenckhahn, Albrecht Goetze, W. von Soden, and E. M. Bruins) and ZA N. F. XVI (1952: Fr. Drenckhahn).

17. PERIODICALS

In the first years of Assyriology papers concerning the cuneiform cultures were chiefly published in the following periodicals (for a detailed bibliography see Chapter II, especially § 8): *Fundgruben des Orients* (: *Mines de l'Orient*, 1810-18); *Journal Asiatique* (1822ff.); *Journal of the Royal Asiatic Society* (1834ff.); *Zeitschrift für die Kunde des Morgenlandes* (1839-50); and *Zeitschrift der Deutschen Morgenländischen Gesellschaft* (1847ff.).

The first time the word "Assyrian" appears in a title in a periodical is in 1870: *Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes* (1870-1923). Much Assyriological matter was published in *Transactions of the Society of Biblical Archaeology* (1872-93) as also in the same Society's *Proceedings* (1879-1918). Not until 1886 did three special periodicals see the light, later supplemented by five others:

Revue d'Assyriologie et d'archéologie orientale (1886ff.).

Zeitschrift für Assyriologie (1886ff.).

The Babylonian and Oriental Record (1886-1900).

Babyloniaca (1907ff.; from 1940ff. with the title: *Revue des études sémitiques et Babyloniaca*).

Archiv für Keilschriftforschung I-II (1923-25), continued with the title: *Archiv für Orientforschung* IIIff. (1926ff.).

Iraq (1934 ff.).

Sumer (1945 ff.).

Journal of Cuneiform Studies (1947 ff.).

Assyriologists must, however, take note that papers of a specific Assyriological character are also published partly in the above-mentioned earlier periodicals such as *J. As.*, *JRAS* and *ZDMG*, partly in other periodicals e. g. *JAOS* (1851 ff.); *AKM* (1859 ff.); *WZKM* (1887 ff.); *AJSL* (1895 ff., continued as *JNES* 1942 ff.); *OLZ* (1898 ff.); *JSOR* (1917 ff.); *Orientalia* (1920 ff.); *Acta Orientalia* (1922 ff.); *Archiv Orientalni* (1929 ff.); *Analecta Orientalia* (1931 ff.). Mesopotamian archaeology too is often to be found outside the special periodicals, e. g. in *Archaeologia* (1770 ff.). *AAA* (1908–48) *MJ* (1910–35); *BASOR* (1919 ff.); *The Antiquaries Journal* (1921 ff.); and *Antiquity* (1927 ff.).

18. TRANSLATIONS

The publication of a single text as well as of a larger text edition, in cuneiform script or (and) in transliteration, is often accompanied by a translation. It would be impossible to register all such here. But we can call attention to larger bodies of translations.

1. ROYAL INSCRIPTIONS.

- a. Sumerian: Peter Jensen, *KB* III 1 (1892); Fr. Thureau-Dangin (1905 and *VAB* I, 1907); G. A. Barton (1929).
- b. Assyrian: Eb. Schrader, F. E. Peiser, H. Winckler, L. Abel, and P. Jensen in *KB* I–II (1889–90); E. A. Wallis Budge and L. W. King, *Annals of the Kings of Assyria* (1902); E. Ebeling, B. Meissner and E. F. Weidner, *Die Inschriften der altassyrischen Könige* (1926; *Allorient. Bibl.* I); Daniel David Luckenbill, *Ancient Records of Assyria and Babylonia* I–II: *Historical Records of Assyria* (1926–27); Tiglathpileser I: W. Lotz (1880); Tukulti-Ninurta II: V. Scheil (1909); Tiglathpileser III: P. Rost (1893);

- Sargon: D. G. Lyon, *AB V* (1883); A. G. Lie (1929); Sennacherib: D. D. Luckenbill, *OIP II* (1924); A. Heidel, *Sumer IX* (1953); Ashurbanipal: M. Streck, *VAB VII* (1916, 3 vols.); Theo Bauer, *AB N. F. I-II* (1933); A. C. Piepkorn (1933; *AS No. 5*).
- c. Babylonian: H. Winckler, C. Bezold, F. E. Peiser, and Eb. Schrader in *KB III 2* (1890); L. W. King, *Chronicles concerning Early Babylonian Kings* (1907, 2 vols.); S. Langdon, *VAB IV* (1912).
2. LAWS.
- a. Codex Ur-Nammu: S. N. Kramer, *Orientalia N. S. 23* (1954).
- b. Codex Eshnunna: A. Goetze, *Sumer IV* (1948); E. Szlechter (1954).
- c. Codex Lipit-Ishtar: e.g. Charles-F. Jean, *La littérature des Babyloniens et des Assyriens* (1924), pp. 48-50.
- d. Codex Hammurabi: Vincent Scheil, *Délégation en Perse. Mémoires IV* (1902); H. Winckler, *Der alte Orient IV* (1903); R. F. Harper (1904); J. Kohler, F. E. Peiser, A. Ungnad, P. Koschaker (1904-23, 6 vols.); E. Ebeling (1926: H. Gressmann, *Altor. Texte z. A. T. 2. Aufl.*, pp. 380ff.); W. Eilers, *Der Alte Orient 31* (1932). V. Scheil (1921); G. R. Driver and John C. Miles (1935).
- e. Assyrian Laws: G. R. Driver and John C. Miles (1952-55, 2 vols.).
- f. Babylonian Laws: e.g. F. E. Peiser, *KB IV* (1896); M. Schorr, *VAB V* (1913); G. Eisser und J. Lewy, *MVAG XXXIII; XXXV: 3* (1930; 1935).
- g. Private administrative and business documents, contracts, etc.:

3. LETTERS.

- a. Old-Babylonian: Paul Kraus, *MVAG* XXXV 2, XXXVI 1 (1931-32, 2 vols.).
- b. Hammurabi: L. W. King (1898-1900, 3 vols.); A. Ungnad, *VAB* VI (1914).
- c. Amarna: C. Bezold (1893); H. Winckler, *KB* V (1896); J. A. Knudtzon, *VAB* II (1915, 2 vols.); S. A. B. Mercer (1939).
- d. The Harper Letters: L. Waterman, *Univ. of Michigan Studies, Human. Ser.* XVII-XX (1930-36, 4 vols.).
- e. Mari: *Archives royales de Mari*. Publ. sous la direction de André Parrot et Georges Dossin. Transcript. et traduct. 1ff. (1950ff.).
- f. Neo-Babylonian: Fr. Martin, *Biblioth. d. l'École des Haut. Études* 179 (1909); E. Ebeling (1930-34, 4 vols.; 1949).

4. THE RELIGIOUS EPICS.

- a. All till then known translated by P. Jensen, *KB* VI 1 (1900).
- b. *Enuma elish*: L. W. King (1902, 2 vols.); St. Langdon (1923); G. Furlani (1934); René Labat (1935); Alexander Heidel (1942, 1951).
- c. Gilgamesh Epic: A. Ungnad u. H. Gressmann, *Allorient. Texte zum A. T.* (1911); R. Campbell Thompson (1928); C. J. Gadd, *RA* XXX (1933; fragment of Tabl. XII, Sumerian version from the Ur excavations); A. Schott (1934); G. Contenau (1939); K. Tallqvist (1945).
- d. *Enuma elish* and Gilgamesh Epic: Arthur Ungnad, *Die Religion der Babylonier und Assyrier* (1921), pp. 25-52, 66-120; E. A. Speiser in J. B. Pritchard, *Ancient Near Eastern Texts* (1950); O. E. Ravn (1953).

- Sargon: D. G. Lyon, *AB* V (1883); A. G. Lie (1929); Sennacherib: D. D. Luckenbill, *OIP* II (1924); A. Heidel, *Sumer* IX (1953); Ashurbanipal: M. Streck, *VAB* VII (1916, 3 vols.); Theo Bauer, *AB N. F.* I–II (1933); A. C. Piepkorn (1933; *AS* No. 5).
- c. Babylonian: H. Winckler, C. Bezold, F. E. Peiser, and Eb. Schrader in *KB* III 2 (1890); L. W. King, *Chronicles concerning Early Babylonian Kings* (1907, 2 vols.); S. Langdon, *VAB* IV (1912).

2. LAWS.

- a. Codex Ur-Nammu: S. N. Kramer, *Orientalia* N. S. 23 (1954).
- b. Codex Eshnunna: A. Goetze, *Sumer* IV (1948); E. Szlechter (1954).
- c. Codex Lipit-Ishtar: e.g. Charles-F. Jean, *La littérature des Babyloniens et des Assyriens* (1924), pp. 48–50.
- d. Codex Hammurabi: Vincent Scheil, *Délégation en Perse. Mémoires* IV (1902); H. Winckler, *Der alte Orient* IV (1903); R. F. Harper (1904); J. Kohler, F. E. Peiser, A. Ungnad, P. Koschaker (1904–23, 6 vols.); E. Ebeling (1926; H. Gressmann, *Allor. Texte* z. A. T. 2. Aufl., pp. 380 ff.); W. Eilers, *Der Alte Orient* 31 (1932).
- e. Assyrian Laws: V. Scheil (1921); G. R. Driver and John C. Miles (1935).
- f. Babylonian Laws: G. R. Driver and John C. Miles (1952–55, 2 vols.).
- g. Private administrative and business documents, contracts, etc.: e.g. F. E. Peiser, *KB* IV (1896); M. Schorr, *VAB* V (1913); G. Eisser und J. Lewy, *MVAG* XXXIII; XXXV: 3 (1930; 1935).

3. LETTERS.

- a. Old-Babylonian: Paul Kraus, *MVAG* XXXV 2, XXXVI 1 (1931-32, 2 vols.).
- b. Hammurabi: L. W. King (1898-1900, 3 vols.); A. Ungnad, *VAB* VI (1914).
- c. Amarna: C. Bezold (1893); H. Winckler, *KB* V (1896); J. A. Knudtzon, *VAB* II (1915, 2 vols.); S. A. B. Mercer (1939).
- d. The Harper Letters: L. Waterman, *Univ. of Michigan Studies, Human. Ser.* XVII-XX (1930-36, 4 vols.).
- e. Mari: *Archives royales de Mari*. Publ. sous la direction de André Parrot et Georges Dossin. Transcript. et traduct. Iff. (1950 ff.).
- f. Neo-Babylonian: Fr. Martin, *Biblioth. d. l'École des Haut. Études* 179 (1909); E. Ebeling (1930-34, 4 vols.; 1949).

4. THE RELIGIOUS EPICS.

- a. All till then known translated by P. Jensen, *KB* VI 1 (1900).
- b. *Enuma elish*: L. W. King (1902, 2 vols.); St. Langdon (1923); G. Furlani (1934); René Labat (1935); Alexander Heidel (1942, 2 1951).
- c. Gilgamesh Epic: A. Ungnad u. H. Gressmann, *Allorient. Texte zum A. T.* (1911); R. Campbell Thompson (1928); C. J. Gadd, *RA* XXX (1933; fragment of Tabl. XII, Sumerian version from the Ur excavations); A. Schott (1934); G. Contenau (1939); K. Tallqvist (1945).
- d. *Enuma elish* and Gilgamesh Epic: Arthur Ungnad, *Die Religion der Babylonier und Assyrier* (1921), pp. 25-52, 66-120; E. A. Speiser in J. B. Pritchard, *Ancient Near Eastern Texts* (1950); O. E. Ravn (1953).

e. Ishtar's Descent . . . : H. H. Figulla, *Memnon* VI (1913), pp. 177-90; A. Ungnad, *Die Religion der Babylonier und Assyrier* (1921), pp. 142-48.

f. *Lugal-e ud me-lam-bi nir-gal₂*: Samuel Geller, *Altorientalische Texte und Untersuchungen* 14 (1917).

5. OTHER RELIGIOUS TEXTS.

- a. Anthologies: Fr. Martin (1900; *Bibl. d'Éc. d. Haut. Ét.* 130); A. Ungnad, *Die Religion der Babylonier und Assyrier* (1921).
- b. Psalms of Penitence: H. Zimmern, *AB* VI (1885).
- c. *Maqlû*: K. L. Tallqvist (1894); G. Meier, *AOF* Beih. 2. (1937).
- d. *Šurpu*: H. Zimmern, *AB* XII 1 (1896).
- e. *Niš kâti*: L. W. King (1896); B. A. van Proosdij (1952); E. Ebeling (1953).
- f. *Utukki limnûti*: R. Campbell Thompson (1903-04, 2 vols.); E. Ebeling, *AOF* XVI (1952-53).
- g. Hymns and Prayers: Heinrich Zimmern, *Babylonische Hymnen und Gebete in Auswahl (Der Alte Orient* VII 3 (1905) and XIII 1 (1911)); A. Schollmeyer (1912: Shamash); A. Falkenstein und W. v. Soden, *Sumerische und akkadische Hymnen und Gebete* (1953).
- h. Ritual Texts: H. Zimmern, *AB* XII 2 (1901); P. Jensen, *KB* VI 2 (1915); Fr. Thureau-Dangin, *Rituels accadiens* (1921).
- i. Astrological Texts, Omens etc.: R. Campbell Thompson, *The Reports of the Magicians and Astrologers of Nineveh and Babylon* (1900, 2 vols.; *Luzac's Semit. Text and Transl. Series* VI-VII); E. F. Weidner, *AOF* XIV (1941-44).
- k. Sumerian Texts: Maurus Witzel, *Keilinschriftliche Studien* (1918-30, 7 vols.).

INDEX OF NAMES

- A-annl-padda, 369, 489.
 Abbas I, 55, 56.
 Abbasids, 270.
 Abel, Niels Henrik, 159, 159⁴.
 Aberdeen, George Gordon-Hamilton,
 4th Earl of, 67.
 Abl-eshu, 469, 476, 477.
 Abri Audi, 392.
 Abu (god), 373, 424, 434.
 Abu (month), 650, 709, 737.
 Abû Gosh, 758.
 Abû Habbah, 3, 274, 284, 298, 311,
 313, 364.
 Abû Haṭab, 366.
 Abulfeda, 42.
 Abû Shahrain, 315, 335, 359-360, 402.
 Abû Usba, 758.
 Abydos, 423.
 Abyssinia, 292, 310.
 Académie des Inscriptions et Belles-
 Lettres, Paris, 44⁸, 181, 289, 293,
 332.
 Accadian, see Akkadian.
 Accads, see Akkads.
 Achaeans, 619.
 Achaemenes, 109, 111.
 Achaemenian(s), 20, 21, 24, 32, 56,
 70, 71², 86, 91, 92, 97, 98, 104, 109,
 122, 123, 125, 131, 132, 133, 135,
 137, 143, 147, 148, 149, 153, 166,
 175, 185, 187, 188, 189, 198, 218¹.
 Acheulian, 385, 387, 389.
 Achenllo-Levalloisian, 391, 393.
 Adab, 367, 485, 501, 683.
 Adad, 541, 584, 587, 592, 646, 709.
 Adad-nîrâri I, 618, 629.
 Adad-nîrâri II, 347, 585, 621-622,
 624, 636.
 Adad-nîrâri III, 155, 275, 339, 343,
 344, 355, 594, 697.
 Adapa, 675, 676-677, 679, 727.
 Adar, see Addaru.
 Addaru, 31², 469, 584, 737.
 Aden, 292, 310.
 Aegean, 422, 619.
 Aelian, 97.
 Afaq, 286, 287.
 Afghan War, 91, 117.
 Afghanistan, 117, 428, 661.
 Agade, 30, 187, 218, 335, 434, 435,
 439, 442, 449, 450, 483, 486, 488,
 498, 499, 500, 501, 502, 503, 505,
 528, 569, 578, 579, 580, 582, 588,
 590, 658, 691, 695, 696, 698, 709,
 712, 717, 741.
 Agadean(s), 448, 486, 500, 501, 502,
 503, 504, 583.
 Agum, 468.
 Agushaya, 573, 574.
 Ahhâzu, 706.
 Ahhlyawa, 619.
 Ahlanu, 449, 621.
 Ahmedabad, 110.
 Alaru, 586, 650, 737.
 Alburshabu, 641, 643, 645, 646, 692,
 704, 711.
 Alolis (Asia Minor), 304.
 'Aḳar Kûf, 43, 44, 45, 52, 298, 338,
 377.
 Akhutaten, 186, 615.
 Aklu Festival, 20, 571, 572-573, 574,
 591, 634, 674, 688, 691-692, 695,
 697, 704-705, 706, 711, 727.
 Akkad, plur. Akkadin (ethnic name
 of Babylonian Scythians), 164, 176.
 Akkad (North Babylonian), 486, 498,
 499, 502, 503, 504, 506, 508, 515,
 529, 619, 620, 628.
 Akkadian (Assyro-Babylonian), 170,
 170¹, 174-175, 175, 187, 201, 202,

- 203, 204, 205-231, 233, 235, 236, 237, 245, 247, 255, 256, 448, 501, 502, 503, 505, 511, 520, 521, 528, 529, 532, 583, 586, 676, 689, 719, 722, 726, 729-734.
- Akkadian (= Sumerian), 163, 177, 178, 179, 181, 182, 183.
- Akkadian Period (see also: Agade), 376, 377, 425, 579, 582.
- Akkadians (Assyro-Babylonians), 200, 201, 202, 203, 448, 449, 450, 486, 635.
- Akkadians, Akkads (= Sumerians), 176, 177, 178.
- Akshak, 7, 10, 372, 486, 487, 498.
- Akshak Dynasty, 372, 483.
- Ak-si-ma-ak-šu, 214.
- Alalah, 186, 314, 426, 466, 470, 499, 502, 649², 720, 753.
- Alasia, 755.
- Aleppo, 84, 271, 274, 277, 314, 502, 576.
- Alexander Balas, 32.
- Alexander Polyhistor, 30⁶.
- Alexander the Great, 2, 9, 24, 25, 26, 27, 28, 30⁶, 34, 53, 89, 633.
- Alexandria (Egypt), 268, 740.
- Alexandria (Mesopotamia), 34.
- Algier, 181.
- Al Hibbah, 307, 313, 365.
- Alishar Hüyük, 587, 754.
- Al Jazira, 1.
- Al-la-tum, 687.
- Alps, 390.
- Alû, 706, 707.
- Al 'Uḫaldir, 277, 391.
- Al 'Uḫalmir, 46, 52, 83, 356-357.
- Aluṣusi, 11.
- Amanus, 1, 18, 146, 449, 499, 502, 575, 582, 627, 660, 662.
- Amardian, 125.
- Amarna, see Tell el-Amarna.
- Amar-utu, 696.
- Amenemhet I, 467.
- Amenemhet II, 467.
- Amenemhet III, 467, 468, 469, 470, 480, 482.
- Amenemhet IV, 467.
- Amenophis III, 186, 615, 616.
- Amenophis IV, 186, 615, 617.
- American School of Oriental Research, Baghdad, 344, 370, 372, 374, 378, 379, 380, 381.
- American School of Prehistoric Research, 372.
- Amherst of Hackney, William Amhurst Tyssen Baron, 22.
- Amni-ditana, 469, 476, 477, 540.
- Amni-zaduga, 240, 465, 468, 469, 471, 473, 474, 476, 477, 478, 525, 691, 700, 738.
- Amorite(s) (see also Amurru), 210, 354, 356, 448, 487, 488, 509, 510, 512, 513, 516, 573, 577, 579, 580, 642.
- 'Amrân, 324, 351, 439, 701.
- Amratian, 636.
- 'Amuq, 298, 314, 320¹, 339, 404, 419, 420, 423, 444, 446, 575, 576, 753.
- Amurru (see also Amorite), 358, 363, 364, 375, 465, 470, 473, 475, 476, 478, 482, 483, 484, 503.
- An, see Anu.
- Anah, 13, 15, 277.
- Anarienne, 162¹, 165.
- Anatolia(n), 410, 442, 453, 456, 469.
- Anau, 426, 445, 456, 654, 754.
- Anikurra, 495.
- Anshan, see Anzan.
- Anshar, 696.
- Antigonos, 26, 27, 28, 29, 30, 36, 37¹.
- Anti-Lebanon, 660.
- Antiochia (Mesopotamia), 34.
- Antiochia (Syria), 280, 502, 624.
- Antiochos I, 24, 30, 30⁶, 31.
- Antiochos III, 34.
- Antiochos IV Eplphanes, 31, 31², 32.
- Antiochos V, 32.
- Antiochos VII Euergetes, see Antiochos VII Sidetes.
- Antiochos VII Sidetes, 33, 34, 35.
- Antipatros, 26, 27, 28.
- Anti-Taurus, 449.
- Anu, 350, 423, 424, 426, 427, 428, 464, 514, 531, 569, 571, 572, 676-677, 691, 695, 696, 698, 701, 708, 738.

- Anu-Adad, 704, 713.
 Anu-Antum, 350.
 Anu-Enlil, 34.
 Anzan, 449, 487, 506, 508, 509, 634.
 Anzanlan, 125, 509.
 Apil-Sin, 464, 469, 582, 643.
 Applanus, 32, 33¹.
 Apsu, 688.
 Arab Bureau, 278.
 Arabia(n), 18, 106, 442, 500, 502, 603, 634, 660, 661, 662.
 Arabia, Turkish, 66, 117, 304.
 "Arabian Nights", 269.
 Arabic, 56, 61, 99, 114, 138, 162, 214, 212, 213, 214, 219, 220, 222.
 Arabs, 33, 42, 48, 49¹, 51, 56, 270, 273, 274, 277, 281, 282, 284, 285, 286, 287, 288, 301, 303, 310, 316, 317, 420, 454, 580, 647, 725.
 Arad-Nana-a, 735.
 Arahšamna, 649, 737.
 Arahtu, 10, 11, 645.
 Arahū, 21.
 Arāḫā, 687.
 Aramaean(s), 449, 580, 596, 621, 622, 623, 624, 634, 635.
 Aramalc, 126, 129, 136, 138, 143, 212, 219, 220, 222.
 Arbela, 592.
 Arcadia, 38.
 Archelaos, 29.
 Archon, 26.
 Ardashir I, 97.
 Ardat Lili, 706.
 Argaeus, see Mons Argaeus.
 Ariarammes, 111.
 Aridu, 602.
 Aristobulus, 9.
 Armanu, 502, 503.
 Armenia, 4, 5, 8, 18, 84, 198, 382, 441, 442, 625, 661, 662.
 Armenian, 61, 97, 98, 135, 138, 502, 614, 622, 660, 661.
 Armenians, 56.
 Arpachlyah, 280, 309, 337, 375, 397, 402, 403, 405, 406, 407, 408-410, 412, 422, 439, 440, 443, 444, 460, 485, 577, 636, 714.
 Arpad, 586, 603, 624, 625.
 Arrapha, 186, 586, 615.
 Arrianus, 2, 9, 224⁵, 23, 24, 24⁴, 25, 97.
 Arsacids, 21, 32, 35, 37¹, 40, 137, 197, 202, 237, 270.
 Arsakes, 32, 32¹, 97.
 Arsakes VI, 32.
 Arsames, 111.
 Artabanos I, 36.
 Artamanya, 615.
 Artatama, 615, 616.
 Artaxerxes I, 86.
 Artaxerxes III Ochus, 24.
 Artaxerxes Vase, see Venezia Vase.
 Aryan, 162.
 Ar-za-ni-a, 4.
 Arzashkun, 623.
 Arzawa, 618.
 Asakkē marṣuṭī Series, 706-707.
 Asakku, 706, 707.
 Ašalla, 597.
 Asar-ri, 696.
 Asdod, 141.
 Asfar, J., 292.
 Ashir, see Ashur.
 Ashmolean Museum, Oxford, 344, 751.
 Aššūr, 137.
 Aššur-nādin-aḫḫē I, 473.
 Aššur-rabī I, 473.
 Ashur (Ashir), 20, 368, 578, 580, 582, 584, 587, 590, 591, 592, 595, 601, 602, 603, 619, 629, 631, 691, 692, 695-697, 699, 705, 724.
 Ashurbanipal, 16, 166, 207, 220¹, 233, 291, 295, 302, 310, 332, 345, 346, 347, 355, 570, 572, 585, 592, 594, 595, 596, 597, 600, 601, 601³, 604, 614, 631-632, 633, 644, 646, 659, 661, 671, 676, 683, 701, 704, 713, 714, 721, 723-725, 768.
 Ashurbanipal's Library, 207, 291-292, 295, 310, 332, 345, 346, 570, 632, 671, 676, 678, 722, 723-725, 728, 735.
 Ashur-bēl-kala, 721.
 Ashur-emli, 588.
 Ashur-malik, 588.
 Ashurnasirpal II, 11, 207, 214, 273,

- 339, 343, 344, 347, 597, 598, 622,
713, 714, 721, 723.
Ashur-rabl, 582.
Ashur-rêsh-lshi, 620.
Ashur-uballit, 617–618, 620, 621.
Ashur-uballit, (Assyrian general), 633.
Asla Minor (see also Anatolia), 15, 16,
18, 175, 186, 198, 230, 277, 304,
325, 491, 499, 507, 513, 575, 576,
581, 582, 583, 586, 587, 588, 589,
603, 614, 615, 616, 618, 621, 625,
661, 667, 691, 754.
Askalon, 628.
Aspasine, 341.
Assos, 304.
Assur, 11, 14, 15, 54, 146, 160, 186,
206, 283, 297, 298, 305, 306⁴, 307,
308, 313, 320, 321, 331, 348–349,
402, 416, 417, 428, 433, 434, 449,
450, 464, 471, 491, 513, 570, 577–
579, 580, 581, 582, 583, 584, 586,
587, 589, 593, 595, 607, 609, 614,
619, 631, 633, 640, 641, 659, 683,
684, 685, 691, 700, 704, 713, 716,
720, 726, 735, 737.
Assyria, 1, 11, 12, 13, 15, 17, 18, 42,
55, 185, 190, 207, 233, 333, 334,
339, 340, 390, 402, 403, 449, 473,
486, 499, 502, 506, 507, 508, 513,
514, 515, 526, 530, 574, 576, 577–
635, 636, 637, 649, 650, 656, 659,
661, 665, 666, 669, 681, 685, 691,
695, 697, 703, 705, 720, 724, 725.
Assyrian Dictionary Project, The
Chicago, 172, 173.
Assyrian Expedition of the Oriental
Institute, Chicago, 300, 342.
Assyrian Exploration Fund, 295–296,
343, 346, 349, 358.
"Assyrians" (Nestorians), 273.
Astarte, 573.
Astyages, 634.
Aswad Mefesh, 407.
Aterlan, 387.
Athenaeus, 35, 351, 188.
Athens, 585.
Atlantic, 389, 390.
Atlitlan, 388.
Atrush, 12.
'Aṭshānah, see Tell 'Aṭshānah.
Aurignac(lan), 385, 388, 389, 391,
392, 393, 394, 401, 458.
Aushpla, see Ushpla.
Austln, Henry, 68.
Australasian, 232.
Australian Institute of Archaeology,
Melbourne, 344.
Austro-Asiatic, 487.
Austronesian, 487.
Avesta, 96, 105.
Awan(ites), 32, 449, 487, 488, 490,
492, 502, 508.
Awel-ili, 519.
Azarbaijan, 419, 757.
Baasheika, 344.
Baba (Ba-ba), 495, 496, 653, 690.
Bābil, 44, 45, 48, 491, 51, 53, 64, 267,
351, 644.
Babkhal, 381, 391.
Babylon, City of, 1, 3, 6, 7, 10, 11, 14,
20, 21, 21², 22, 23, 24, 25, 26, 27,
28, 28⁴, 29, 30, 30⁶, 31, 32, 33, 35,
36, 37, 38, 39, 40, 43, 43¹⁰, 44,
44⁵⁻⁸, 45, 45³⁻⁵, 46, 47, 48, 49, 50,
51, 52, 53, 64, 66, 67, 68, 75, 76,
77, 81, 83, 89, 94, 115, 132, 133,
136, 137, 142, 157, 186, 189, 218,
220, 267, 268, 269, 270, 278, 283,
297, 298, 299, 305, 306⁴, 307, 308,
313, 314, 315, 320, 324, 326, 330,
331, 341, 351–352, 439, 463, 466,
469, 476, 478, 489, 507–508, 511,
512, 513, 515, 516, 518, 520, 524,
531, 570, 571, 572, 574, 576, 587,
591, 606, 607, 613, 618, 619, 620,
625, 629, 631, 632, 633, 634–635,
638, 639, 640, 641, 642–649, 662,
683, 684, 685, 691, 692, 696, 700–
703, 704, 705, 711, 712, 713, 715,
720, 724, 726, 728, 737, 739.
Babylonia, 1, 2, 3, 7, 9, 11, 13, 16, 17,
18, 20, 30⁶, 33, 35, 45, 53, 54, 57,
81, 106, 125, 176, 180, 181, 190,
233, 270, 286, 292, 296, 303, 312,
330, 334, 339, 464, 473, 486, 487,
488, 497, 498, 499, 501, 502, 503,
505, 506, 507, 508, 509, 510, 511,

- 512, 513, 514, 515, 516, 520, 521, 526, 543, 555, 569, 573, 575, 576, 582, 584, 585, 587, 588, 591, 592, 595, 596, 600, 605, 606, 607, 610, 611, 612, 613, 614, 615, 617, 618, 619, 620, 621, 622, 623, 624, 625, 628-629, 631-632, 633-635, 637, 640, 642, 647, 650, 654, 655, 656, 659, 660, 661, 663, 665, 676, 682, 684, 694, 705, 710, 719, 720, 725, 727, 728, 729.
- Babylonian Chronicle B, 628.
- Babylonian Exploration Fund, Philadelphia, 354.
- Bactria, 106.
- Bactrian, 31, 33, 114.
- Badakshan, 428, 661.
- Badari, 423.
- Baghdad, 1, 6, 41, 43, 44, 45³, 47, 48, 50, 51¹, 52, 55, 66, 67, 69, 80, 81, 91, 111, 112², 117, 118, 119, 121, 129, 136, 148, 152, 153, 154, 155, 156, 186, 269, 270, 271, 273, 274, 277, 278, 284, 286, 287, 290, 300, 301, 302, 303, 336, 338, 341, 403, 451, 462, 644.
- Baghouz, 339, 405, 754.
- Bahrain, 629.
- Baikal Sea, 662.
- Bakhtiyari, 286.
- Bakun, 339, 405, 415, 417, 418, 419, 445, 446, 456, 757.
- Balâwât, 186, 199, 285, 311, 362, 623, 721.
- Balih, 314, 407, 622, 754.
- Balkan, 450.
- Baluchistan, 460, 754-755.
- Banbakabna, 11.
- Bandar Bushlire, 418, 757.
- Bânitum, 645.
- Bantu, 232.
- Baradost, 338, 379-380, 400, 401, 403, 405, 406, 412, 419, 439.
- Barak, 381.
- Barda Baika, 338, 379, 390, 391, 392, 393, 393¹.
- Barnanitarra, 492, 495, 657.
- Basque, 131, 178, 232.
- Basrah, 43, 53, 67, 68, 271, 286, 292, 300, 301, 302, 303, 304, 332.
- Bau, see Baba.
- Bavlan, 10, 11, 12, 186, 287, 289, 382, 476, 477.
- Behahtha, 287.
- Behistun, see Bihistûn.
- Bekhme, 13.
- Bêl-adonim-ša, see Sennacherib.
- Bêlat êkallim, 578.
- Bêl-dân, 586.
- Bêl-Harrân-bêl-uşur, 586.
- Bêl-ihul, 628.
- Bêll-idlînnam, 517.
- Bell, Mr., 81.
- Bellapaise, 401.
- Bellino Cylindar, 87.
- Belos, Beius, 37, 45, 46, 52, 53.
- Bêl-shar-uşur, 631.
- Belshazzar, see Bêl-shar-uşur.
- Bêl-šimanni, 21, 21⁵.
- Bêl(u), 38, 503, 531, 470, 572, 592, 696.
- Benedict XIV, 45.
- Berlin Vocabulary, 240, 241, 733.
- Berossus, 30⁶, 188, 396, 473.
- Bihistûn, 21, 21³, 55, 70, 84, 89-91, 92, 108-123, 125, 126, 128, 129, 132, 134, 136, 142, 143, 148, 149, 152-159, 162, 163, 166, 166², 170, 180, 185, 188, 189, 269.
- Bilalama, 528, 529.
- Billah Pottery (cf. Nlneveh Pottery), 344, 416, 417, 425, 426, 431, 432, 433, 440.
- Blrs Nimrûd, 22, 31¹, 44, 45, 46, 51, 52, 53, 313, 315, 352-353, 703, 731.
- Bisi(u)tun, see Bihistûn.
- Bismâya, 186, 309, 367.
- Bismiyah, see Bismâya.
- Blt Adlni, 597, 622, 623, 624.
- blt akltu, 644, 704-705, 711.
- Blt Bahrlani, 597.
- Blt hillâni, 627, 649, 649².
- blt rimki, 673, 700, 703, 706, 708.
- Black Obelisk Inscription, 149, 155, 157, 158-159, 584, 623.
- Black Sea, 576.
- Black Stone Inscription, 77.
- Blau Monuments, 192.

- Boghazkeul, 185, 186, 218¹, 230, 241, 242, 332, 332⁴, 452, 587, 618, 726, 735, 738, 754.
 Bombay, 43, 66, 67, 68, 108, 110, 117, 271, 299, 301.
 Borgia, Cardinal Stefano, 65.
 Bornu, 232.
 Borsippa, 10, 31, 46, 162, 163, 315, 352-353, 606, 607, 632, 691, 697, 701, 704, 724, 737, 739.
 Bosphorus, 107.
 Brak, see Tell Brak.
 British Agency, Baghdad, 66, 67, 117, 271, 304.
 British Euphrates Expedition, 54, 270, 300.
 British Museum, London, 66, 93, 153, 160, 162, 164, 167, 185, 266, 268, 269, 277, 278, 280, 291, 292, 296, 299, 301, 302, 303, 304, 310, 312, 327, 336, 342, 343, 344, 345-347, 348, 350, 351, 352, 353, 355, 357, 359, 360, 361, 362, 363, 364, 369, 375, 487, 723, 724, 750.
 British Residency, Baghdad, 51¹, 66, 67.
 British School of Archaeology in Iraq, Baghdad, 269, 344, 375.
 Brussels Vocabulary, 732.
 Brydges, Sir Harford Jones, 67, 77.
 Bull Inscription, Louvre, 145, 146.
 Burnaburiash II, 617-618, 618.
 Bur-Sin, 359, 360, 366, 367, 578, 584.
 Bushire, see Bandar Bushire.
 Buwriye, 349.
 Byblos, 755.
 Byron, George Gordon, 6th Lord, 51.
 Cabinet du Roi, Paris, 65.
 Cadavène, M. de, 289.
 Caesar, 319.
 Caesarea, 507, 581, 582, 587.
 Caillou Michaux, 64, 66, 77, 132, 134, 135, 138, 185.
 Calro Conference, 278.
 Calah, see Kalhu.
 Caleutta, 68, 69, 83.
 Caliphate, 20.
 Cambridge University, 344.
 Cambyses, 20, 21, 635, 691, 697.
 Camplon de Tersan, see Tersan.
 Canaanean, 210, 399².
 Canis major, 738.
 Canning, Sir Stratford, 273, 293, 294, 295, 296, 301, 342, 344.
 Cappadocia(n), 16, 18, 26, 106, 331, 507, 581, 583, 584, 586, 587, 588, 666.
 Capsian, 388, 400.
 Carchemish, 299, 314, 339, 407, 409, 426, 597, 603, 618, 619, 621, 625, 633, 662, 755.
 Carmel, see Mount Carmel.
 Caspian (Sea), 32, 33, 443, 454.
 Cassiopeia, 738.
 Cassius, Avidius, 30¹.
 de Castries, Maréchal, 48³, 49⁴.
 Cataonia, 618.
 Caucasian, 131, 232, 487.
 Caucasus, 491, 575.
 Caylus Vase, 50, 50¹, 63, 64, 66, 73, 86, 104, 108, 132, 140, 185.
 Čehil-Minâr, 56¹.
 Central Asia, 454.
 Ceylon, 269, 293, 301.
 Chagar Bazar, 186, 280, 298, 337, 405, 407, 408, 409, 468, 470, 755.
 Chaheiminar, 56¹, 61, 61².
 Chalcolithic, 399², 409, 420, 422, 575.
 Chaldaea, 1.
 Chaldaean(s), 56, 61, 129, 135, 273, 291, 449, 625, 720, 724.
 Chaldian, 198.
 Chancelade, 389.
 Chanh-daro, 756.
 Characene, 33, 35.
 Charente, 389.
 Charles I, 59.
 Charon, 38.
 Chasmah Ali, 339, 418, 443.
 Chatal, 298.
 Châtelperon(ian), 388, 389, 393.
 Chellian, 385.
 Chelminra, 56¹.
 Chenchemal, 390, 398, 400.
 Cheops, 436.
 Chicago Vocabulary, 731.
 Chilminar, 56¹.

- Chlmlnara, 56¹.
 Chlmlnar, 56¹, 59.
 Ch'ln, 497.
 China, 386, 388, 513, 755.
 China, Emperor of, 138.
 Chinese, 58, 114, 188, 232, 268, 393, 497.
 Chlnns, see Bavlan.
 Choaspes, 2.
 Choga-Zambil, 757.
 Chorax, 2.
 Chou, 513.
 Chôzlan, 126, 132.
 Christianity, 546.
 Cicero, 188, 737.
 Cillela(n), 16, 28, 404, 442, 618, 661, 662.
 Cilmlnar, 56¹.
 Cimmerians, 625, 630, 631.
 Circesium, 662.
 City Museum and Art Gallery, Birmingham, 344.
 Clactonian, 387, 389.
 Clark, E. W., 354.
 Cleveland Museum, Ohio, 372.
 Cockburn, Colonel James, 269¹.
 Code of Hammurabi, see Codex H.
 Codex Bilalama, see Codex Eshnunna.
 Codex Eshnunna, 351, 528, 529-530, 768.
 Codex Hammurabi, 185, 200, 207, 332, 492, 504, 515, 517, 518, 520, 523, 524, 525, 526, 527, 529, 530-568, 572, 611, 652, 663, 670, 680, 728, 734, 736, 768.
 Codex Lipit-Ishtar, 528, 529, 529¹, 768.
 Codex Ur-Nammu, 528, 529, 768.
 Collegio Romano, Rome, 65.
 Combe Capelle, 389.
 Congress of Orientalists, 18. International, 336, 402.
 Constantinople, 273, 274, 276, 278, 289, 290, 292, 293, 294, 295, 301, 303, 338, 471, 529.
 Cotton, Sir Dodmore, 57.
 Coup-de-poinc Culture, 387.
 Cox, Sir Percy, 278.
 Creation Epic, see *Enuma elish*.
 Crimean War, 269, 293.
 Croesus, 634.
 Crô-Magnon, 388, 389, 458, 459.
 Crô-Magnon, Vézère, 389.
 Ctesias, 97, 137, 649.
 Ctesiphon, 33, 40, 50, 77.
 Cufic, 138, 141.
 Curtius Rufus, Quintus, 24⁴, 649.
 Cyaxares, 633.
 Cyprus (Cypriote), 68, 399, 401, 409, 411, 441, 442, 444, 446, 447, 626, 661, 720, 755.
 Cyrus, 20, 21, 24, 104, 140, 144, 352, 634, 635, 645, 697.
 Cyrus (the Younger?), 78, 86.
 Dagan, 614.
 Dahan Scythas, 32.
Daily Telegraph, 343, 346.
 Dair, see Dêr.
 Dair-az-Zûr, 614.
 Damanum, 519.
 Damascus, 600, 622, 623, 624, 662.
 Daughan, 329, 757.
 Darius I Hystaspis, 21, 21², 39, 56, 71, 71², 76, 83, 85, 86, 88, 89, 91, 94, 99, 100, 101, 102, 107, 109, 110, 111, 115, 116, 117, 118, 126, 127, 129, 140.
 Datla, 588.
 Dedekind, Julius Wilhelm Richard, 740.
 Delem, 363.
 Demetrios I, 32, 33.
 Demetrios II, 33.
 Demetrios Pollorketes, 25, 28, 29, 37¹.
 Department of Antiquities, Baghdad, Iraq, 281, 284, 326, 338, 341, 351, 359, 360, 363, 376, 377, 378, 379, 380, 381.
 Department of Egyptian and Assyrian Antiquities, BM, 336.
 Department of Near Eastern Studies, University of Michigan, 380, 381.
 Dêr, 186, 284, 339, 363.
 Dêr (Dûr-Anu, Dûr-Ilû), 625.
 Derbende-Khan, 13.
 Derbent, 623.
 Deri, 96.
 Deutsche Archäologische Institut, 350.

- Deutsche Forschungsgemeinschaft, 350.
- Deutsche Orient-Gesellschaft zu Berlin, 306, 307, 349, 352, 353, 366, 367, 368, 642.
- Devanāgarī, 189.
- Development Board of Iraq, 13.
- Diadochi, 25, 27, 29.
- Diarbekir, 277, 502.
- Dilbat, 363, 477, 517.
- Dilmun, 629, 698.
- Dinashki, see Damascus.
- Dinktim, 350.
- Diodorus Siculus, 24³, 25, 26¹⁻⁴, 27, 27³, 28¹⁻⁵, 29²⁻⁴⁻⁸, 32¹, 35, 35¹, 36⁵, 37, 37¹, 38, 40, 40², 56, 89, 94, 108, 188, 737.
- Diopantus, 740, 743.
- Diospolis parva, 444.
- Diphilos, 28, 29¹.
- Directorate General of Antiquities, Baghdad, see Department of . . .
- Diyala, 6, 13, 280, 303, 403, 426, 456.
- Diyala Pottery, see Scarlet Pottery.
- Dochilos, 26.
- Don, 392, 394, 395.
- Doubleday, Mr., 312.
- Drangiana, 18.
- Dravidian, 232.
- Drehem, 186, 284, 369-370, 507, 725.
- Dropsie College, Philadelphia, 372.
- Dubrum, 506.
- Dukan, 13, 391.
- Dumu-zi(-abzu), 489, 693.
- Dungl, see Shulg.
- Dûr-lakin, 625.
- Dûr-Kurğalzu, 338.
- Dûr-Rimush, 375.
- Dûr-Sharrukin, 185, 186, 331, 341-342, 593, 626-627, 639, 649, 703, 704, 720.
- Du'ûzu, 650, 709, 737.
- Dynastic (King) Lists, 483, 485, 488, 512, 542.
- Ea (see also Enki), 571, 572, 574, 592, 676-677, 678, 679, 695, 696, 697, 701, 703, 707, 708, 738.
- Eabani, see Enkidu.
- Eanna, 350, 422, 423, 424, 426, 427-428, 429, 434, 435, 436, 438, 439, 448, 451, 713.
- Eannatum, 483, 487, 488, 489, 490, 500, 717.
- Early Dynastic Period, 32, 280, 395, 417, 423, 424, 425, 426, 428, 432-434, 434, 434, 435, 436, 438, 439, 440, 441, 442, 443, 445, 447, 448-449, 450, 452, 455, 459, 460, 461, 484, 486, 488, 491, 494, 637, 640, 712, 715, 716.
- Easter Islands, 280.
- East India Company, (British), 47, 61, 66-67, 75, 76, 77, 108, 134, 137, 267, 271.
- East India Company, (Dutch), 65¹.
- East India House Inscription, 77, 79, 83, 133, 134, 135, 139, 140, 142, 144, 166, 185, 704¹.
- East Semitic, 205, 210, 580.
- E-babbar-ra, 702.
- E-dub-lal-mah, 358.
- Egibi, 23, 352, 662.
- E-gi-dûn, 377.
- Egiparimûn (*ez-gig-pars-imin(-bi)*), 428, 704.
- Egypt, 1, 3, 4, 8, 9, 14, 15, 17, 24, 28, 29, 32, 37, 38, 62, 62², 72, 73, 76, 138³, 150, 186, 268, 326, 332², 422, 423, 435-436, 436-437, 442, 446, 460, 466, 467, 471, 484, 484², 502, 506, 520, 585, 596, 598, 603, 614, 615-616, 617, 619, 620, 625, 626, 628, 630-631, 632, 633, 650, 661, 691, 713, 755-756.
- Egyptian(s), 126, 171, 173, 175, 186, 188, 189, 190, 196, 268, 435, 436, 437, 438, 466, 467, 468, 470, 480, 482, 484², 596, 618, 627, 631, 633, 636, 661, 662, 720.
- Eharsag, 357.
- E. KAS. GAR, 492.
- Ekbatana, 81, 89, 108, 136.
- Ez-kiš-širš-gal₂, 358.
- Ekron, 628.
- e-ku-a, 701.
- E-kur, 333.

- E₂-kur-ru-ki-šar₂-ra, 704.
 Elam, 2, 18, 35, 442, 449, 487, 491, 499, 501, 502, 505, 506, 507, 508, 513, 514, 515, 520, 597, 601, 605, 614, 620, 625, 628, 630, 631, 632, 654, 661, 713.
 Elamite, 70, 124, 126, 131, 198, 449, 450, 502, 503, 505, 513, 520, 578, 579, 633, 718.
 Elamites, 7, 35, 185, 451, 487, 505, 509, 531, 574, 625, 628, 644, 718.
 El-Khan, 381.
 El Khiam, 758.
 El Omari, 756.
 Elphinstone, Mountstuart, 68.
 Elwend, see Mount Elvend.
 Elymaea (Elymais), 33, 176.
 Emesa, 146.
 Emutbal, 514, 517.
 Enannatum 1, 483.
 Enannatum 11, 483.
 Enazuén, 588.
 Enetarzi, 483.
 Eniggal, 494, 496.
 En-ki, 489, 676.
 Enkidu, 677-678, 681, 683, 684, 687, 716, 717.
 Enkomi, 409, 755.
 Enlil, 10, 219, 333, 464, 489, 491, 497, 498, 499, 500, 504, 505, 506, 507, 508, 514, 569-570, 571, 572, 584, 591, 619, 659, 691, 696, 698, 738.
 Entenena, 422, 487, 490, 491, 665, 717.
Enuma elish, 570-573, 574, 676, 680, 680¹, 688-690, 693, 694, 694¹, 726, 727, 737, 769.
 Enurta, see Ninurta.
 En-zu, 697.
 Epic of Creation, see *Enuma elish*.
 Erech, 2, 349-350, 486, 487, 488.
 Erech 111, 483.
 Erech V, 477.
 Eresh-ki-gal, 687.
 Erilbam, 519.
 Eridu, 2, 10, 296, 297, 298, 299, 320, 326, 338, 359-360, 396, 402, 405, 407, 412-413, 415, 417, 418, 419, 420, 421, 422, 423, 424, 425, 427, 428, 430, 439, 440, 444, 453-454, 455, 457, 458, 459, 461-462, 485, 510, 571, 574, 607, 638¹, 676, 696, 703, 704, 707, 714-715, 726.
 "Eridu" Pottery, 360, 405, 407, 413-416, 416, 417, 419, 422, 426, 440, 445, 456.
 Erishum, 464, 582.
 Erridupizir, 505.
 Ertebolic, Denmark, 387.
 E₂-sag-aš, 704.
 Esagila, 22, 23, 24, 24⁴, 25, 26, 27⁵, 30, 31, 34, 36, 37, 38, 307, 324, 439, 489, 531, 570, 573, 620, 646, 691, 692, 693, 700-702, 704.
 Esarhaddon, 12, 67, 141, 160, 275, 343, 346, 355, 472, 480, 594, 595, 600, 604, 607, 614, 630-631, 642, 701, 735.
 Eshnunna, 373, 485, 510, 512, 513, 514, 640.
 Eski-Mosul, 13, 43.
 Esther's Book, 584.
 Etemenanki (E₂-temen-an-ki), 7, 23, 24, 37, 283, 324, 489, 641, 646, 692, 693, 700, 702-703, 704, 711.
 E₂-temen-ni₂-gur₃, 357.
 Ethiopia, 18, 114, 631.
 Ethiopian, 214, 219, 220, 222.
 E₂-timmu, 706, 707.
 Etrurian, 232.
 Euemerios, 32, 35¹.
 Euler, Leonard, 740.
 Eumenes, 25, 26, 27, 28, 37¹.
 Euphrates, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 16, 17, 26, 33, 36, 41, 45³, 51, 54, 67, 277, 285, 299, 302, 303, 330, 335, 396, 500, 509, 513, 587, 599, 614, 618, 619, 622, 643, 644, 645, 647, 648, 659, 662, 669, 689, 704.
 E₂-ur₃-imin-an-ki, 704.
 Europe, 15, 386, 388, 390, 392, 393, 393¹, 394, 395, 441.
 Eurydice, 28.
 Eusebius, 306⁶, 188.
 Expédition scientifique et artistique de Mésopotamie . . . , 46, 290, 302, 351, 353, 356.

- e-zi-da* (Babylon: Esagila), 701.
 Ezida (Borsippa), 31, 353, 724.
- Falsai 1, 271, 277, 278.
 Falûja, 1, 3, 7, 10, 19, 519.
 Fara, 6, 7, 186, 187, 193, 194, 198, 200, 240, 326, 334, 365-366, 424, 430, 433, 434, 440, 448, 450, 452, 638, 725.
 Fauvel, Baron L. Fr. S. de, 66.
 Fayum, 437, 446, 755.
 Fermat, Pierre de, 740, 744.
 Field Museum of Natural History, Chicago, 356, 369, 371, 374.
 Finno-Ugrian, 124.
 Firdausi, 268.
 Fogg Museum, Harvard University, 370.
 Fomalhaut, 695.
 Fontéchevade, Charente, 389.
 Frederik III, Duke of Gottorp, 572.
 Frege, Gottlob, 740.
- Gablene, 27.
 Gabres, 62.
 Gadamarga, 27.
 Gallû, 706, 707.
 Gandash (Gandush, Gandish), 476.
 Gargarino (Don, Russia), 392.
 Gaures, 62.
 Gauss, Johann Carl Friedrich, 740.
 Gawra, 280, 309, 334, 335, 337, 338, 371-372, 403, 405, 406, 407, 409, 410, 412, 415, 416-417, 419, 421, 422, 424, 425, 428, 430, 431, 438, 439, 440, 441, 442, 445, 577, 598, 637, 638¹.
 Gawra Period, 424, 430, 431.
 Gaza, 28, 625.
 Gazur, 370, 486.
 Gedrosia, 757.
 General Theological Seminary, New York, 192.
 Genesis, 137.
 Georgian, 98, 124, 128, 232.
 Geoy Tepe, 419, 757.
 Gerzean, 423, 435, 442.
 Gezer, 323.
 Gharraf, 13.
- Ghassullian, 399².
 Ghazi of Iraq, King, 13.
 Ghazni, 117.
 Gilgamesh (Epic), 6, 346, 375, 675, 676, 677-679, 681, 683, 684, 687, 694, 716, 717, 727, 745, 769.
 Gilmillum, 517, 518.
 Gimit-Sin, 373, 509, 529.
 Gird Ali Agha, 381.
 Gird Banahilk, 381.
 Gird Chal, 381.
 Girsu, 517.
 Girumu, 374.
 Giyan, see Tepe Giyan.
 Gomel, 12, 287.
 Gordon-Hamilton, see Aberdeen.
 Gorge d'Enfer, Crô-Magnon, 389.
 Goshtasp, 99, 101.
 Grai Resh, 338, 412, 422, 424, 430, 431, 440.
 Gravette (Gravettian), 387, 388, 391, 392, 398, 401.
 Greece, 21, 23, 38, 66.
 Greek, 56, 57, 61, 107, 119, 212, 295, 307, 308, 546, 587, 722.
 Griffith Institute, Oxford, 344.
 Grimaldi, 389, 392.
 Grotefend Inscription (or Cylinder), 87.
 Guddunesar, 495.
 Gudea, 53, 198, 200, 237, 248, 249, 252, 262, 361, 483, 483⁴, 488, 490, 491, 492, 496, 497, 505, 589, 650, 660, 661, 664, 666, 667, 668, 681, 685, 690, 691, 696, 699, 700, 705, 712, 718, 719, 725, 729, 745.
 Gudenaar, Denmark, 387.
 Guenna, 488.
 Gula, 621, 645, 739.
 Gundûk, 382.
 Gurgân, 33.
 Gustasp, 96, 99, 101.
 Gutians, 30, 32, 449, 451, 497, 503, 504, 505.
 Gutium, 477, 483, 505, 506, 508, 525, 583, 615, 644.
 Guzana, 624.
 Guzerat, 110.
 Gyges, 631.

- Habur, 4, 17, 280, 314, 337, 376, 390,
 407, 411, 466, 468, 470, 486, 502,
 579, 614, 615, 616, 622, 624, 662.
 Habur Pottery, 425, 468.
 Hadabiti, 11.
 Hajji Muhammad, 414, 418, 422, 440.
 Hajji Muhammad Pottery, 413, 414-
 415, 417, 418, 419, 440, 445.
 Halabja, 13.
 Halaf Pottery, 336, 337, 375, 406,
 407-412, 412, 415, 416, 417, 418,
 419, 422, 438, 439, 441, 442, 445,
 451, 452, 455, 460, 485, 714, 716.
 Haldia, 622.
 Halla, 487, 505.
 Hallatamti, 487.
 Haltamti, 487.
 Halule, 628.
 Halys, 581.
 Hama, 407, 409, 423, 435, 446, 625,
 756.
 Hamadân, 55, 81, 83, 89, 105, 108,
 119, 269, 293.
 Hamath, see Hama.
 Hamilton, Mr., 67.
 Hamito-Semitic, 232.
 Hammurabi, 6, 10, 185, 200, 206, 209,
 210, 218¹, 220, 325, 331, 332, 335,
 351, 435, 463, 464, 465, 466, 468,
 469, 470, 470⁵, 471, 472, 473, 474,
 477, 478, 479, 480, 481, 482, 483,
 484, 498, 504, 505, 509, 512, 513-
 514, 515-534, 568-574, 575, 576,
 577, 578, 579, 580, 586, 590, 592,
 596, 611, 612, 613, 618, 619, 620,
 640, 641, 642, 650, 651, 652, 658,
 662, 665, 666, 667, 668, 670, 676,
 681, 688, 690, 691, 693, 695, 696,
 698, 704, 705, 712, 717, 718, 719,
 725, 726, 728, 730, 734, 737, 738,
 741, 759, 769.
 Hamoudi, 299.
 Hamza, 287.
 Han, 497.
 Hand-axe Culture, 387.
 Hand-point Culture, 387.
 Hanl, 351.
 Hanigalbat, 450, 615, 617, 622, 623,
 624.
 Hantilis, 479.
 Harappa, 447, 460, 500, 756.
 Harmal, see Tell Abû Harmal.
 Harran, 17, 78, 186, 587, 607, 633,
 634, 662, 697.
 Harrison, Messrs, 118, 118⁴.
 Harz, 390.
 Hassuna and Hassuna Culture, 298,
 320, 327, 338, 378, 389, 401, 401²,
 401-407, 407, 408, 409, 410, 411,
 412, 413, 415, 416, 418, 419, 420,
 422, 430, 434, 437, 438, 439, 440,
 441, 442, 443, 445, 446, 447, 452,
 455, 457, 458, 459, 460, 460-462,
 577.
 Hassuna Pottery, 379, 400, 404, 411,
 414, 417, 418, 419, 439, 444, 452,
 457, 460-461.
 Hatrah, 54, 270, 273, 286, 287.
 Hattic, 582.
 Hattushash, 576, 587, 618, 726, 754.
 Hattushilish I, 576.
 Hattushilish III, 618.
 Hazer Merd, 337, 372, 381, 390, 390¹,
 391, 392, 393, 394, 400, 401, 403,
 410, 412, 439, 444.
 Hebrew, 56, 57, 61, 129, 141, 143,
 143¹, 145, 148, 166, 174, 180, 219,
 220, 222, 229.
 Hella, Helle, see Hillah.
 Helwan, 756.
 Herât, 108.
 Hermes, 38.
 Herodotus, 2, 4, 19, 21², 22⁵, 23, 24,
 39, 40², 46, 107, 124, 137, 188, 555,
 639, 641, 652, 653, 683, 686, 700,
 734.
 Hertz, Mr. B., 67.
 Hesiodus, 39¹.
 Hester, Mr., 117.
 Hevenk, see Adad-nirâri.
 Hhidekel, see Tigris.
 Hieroglyphs, 58, 61, 73, 104, 135,
 143, 165, 188, 190, 193, 197.
 Hijlya, 381.
 Hillah, 4, 13, 14, 44, 44⁶, 45, 45³⁻⁵,
 46, 46⁶, 48, 49, 50, 64, 66, 75, 82,
 94, 132, 137, 282, 283, 285, 286, 644.
 Hilmi Pasha, 275, 355.

- Himeros, 32, 35, 36, 37¹, 38.
 Hindiya, 10, 13.
 Hindukush, 662.
 Hindûstânî, 110.
 Hine, John, 51¹, 69, 81, 82.
 Hipparchus, 739.
 Hissar, see Tepe Hissar.
 Hissar Culture, 443.
 Hissarlik, 283.
 Hit, 2, 277, 390, 396.
 Hittite, 197, 198, 212, 478, 479, 486,
 576, 587, 589, 611, 614, 615, 616,
 617, 618, 620, 621, 625, 627, 649²,
 666, 729, 733, 735, 738.
 Hittites, 185, 469, 478-479, 481, 575-
 576, 582, 613, 616-617, 617, 618,
 625, 661, 667, 729.
 E. A. Hoffmann Collection, 192.
 Homerus, 39, 283.
 Homo neanderthalensis, 388.
 Homo sapiens, 388, 389.
 Hû, 444.
 Hubshumkibi, 502.
 Hulagu, 20, 271.
 Hull, Eleanor, 347.
 Hurri, 616.
 Hurrians, 230, 451, 456, 576, 615,
 622, 623.
 Hurritic, 344, 417, 452, 505, 622.
 Hursagkalama, 30, 356.
 Hu-su-ur (Khosr), 11.
 Hyde, Sir Charles, 347.
 Hyksos, 598.
 Hyrcania, 33, 35, 35¹.
 Hystaspes, 32, 34, 341³, 35.
 Hystaspes, 96, 99, 100, 104, 109, 110.,
 111, 140.

 Ibal-pi-el, 463.
 Iberian, 178.
 Ibero-Maurusian(s), 400.
 Ibit-Ishtar, 717-718.
 Ibl-Sin, 509, 581, 583, 659.
 Ibn Hauqal, 42, 89.
 Ibrâhîm ei Halil, 352-353.
 Idin-Zababa, 540.
 Ilâkabkabu, 463, 464.
 Ilias, 39.
 Illustrated London News, 340.
 Iuma-llu, 575.
 Ium-Ishar, 464.
 Iushuma, 464, 513, 578, 579, 580, 582.
 Im-dugud, 369.
 Ingur-Enil (City of), 362, 623.
 Ingur-Enil (City wall of Babylon),
 643, 721.
 Imperial Ottoman Museum, (Con-
 stantinople), 276, 277, 364.
 Ina-ibbi-ershet, 540.
 Inbu Series, 675.
 Indara, 615.
 India, 27, 29, 51, 55, 64, 96, 114, 117,
 269, 443, 460, 661, 662, 756.
 Indian, 61, 108, 189, 205, 662.
 Indo-European(s), 128, 150, 175, 189,
 190, 212, 213, 228, 232, 233, 236,
 247, 249, 251, 253, 254, 257, 260,
 265, 455, 486, 505, 574, 575, 615,
 619, 623, 633.
 Indo-Scythian, 114.
 Indra, 615.
 Indus (Valley), 389, 447, 460, 753,
 756.
 Ingharra, 356.
 Inglis, Sir Hugh, 77.
 Innina, 489, 503.
 Inurta, see Ninurta.
 Ipsos, 29.
 Iran, 14, 16, 18, 21, 27, 29, 32, 40,
 186, 319¹, 329, 339, 405, 419, 420,
 422, 426, 442, 445, 449, 454, 455,
 508, 514, 574, 575, 623, 625, 633,
 634, 661, 753, 756-757.
 Iranian(s), 268, 388, 393, 397, 405,
 417, 418, 419, 420, 422, 425, 431,
 442, 445, 449, 450, 455, 505, 514,
 574, 625, 644, 674.
 Irano-Semitic, 455.
 Iraq(i), 271, 277, 278, 279, 280, 281,
 288, 302, 306, 308, 309, 313, 317,
 337, 338, 351, 359, 360, 363, 372,
 376, 377, 378, 379, 380, 381, 385,
 386, 387, 389, 390, 391, 392, 393,
 394, 396, 401, 412, 437, 458, 750.
 Iraq Expedition of The Oriental In-
 stitute, Chicago, 342, 373, 374, 376.
 Iraqi Museum, Baghdad, 186, 278,
 279, 280, 313, 370, 451, 751.

- Iraqis, 316.
 Iraq Petroleum Company, 344.
Irkallu, 687.
 Isalah, 40, 141.
 Ishbi-Irra, 509, 510, 529.
 Ishchali, 375.
 Ishhupri, 630.
 Ishmie-Dagan, 464.
 Ishtar, 337, 347, 367, 375, 573-574, 577, 578, 587, 592, 616, 619, 646, 676, 681, 682, 687, 693, 694, 695, 696, 727, 738, 770.
 Ishtar Gate, 49, 641, 643, 645, 646, 692, 704.
 Ishtup-Ilum, 464.
 Isin, 373, 484, 485, 488, 510, 512, 513, 529, 575, 654.
 Isin II, 620, 759.
 Isin-Larsa Period, 373, 510-514, 516, 520, 521, 526, 528, 536, 542, 650, 654, 676, 726.
 Islam, 3, 273.
 Islamic, 270, 276, 285, 333.
 Ismâ'îl Pasha, 273, 287.
 Ispahan, 55, 68, 71, 82, 87.
 Israel, 625.
 Israelites, see Ten Tribes.
 Issus Gulf, 618.
 Istanbul, see Constantinople.
 Itti-Mardukbalaṭu, 34.
 Iyyar, 586.
 Japhetic, 453.
 Jarmo, 298, 315, 317, 319, 324, 325, 327, 338, 378-379, 380, 389, 394, 395, 396, 398-401, 403, 404, 406, 409, 410, 412, 415, 416, 418, 420, 432, 436, 437, 439, 440, 441, 444, 447, 455.
 Jawa, 386.
 Jebel Hamrin, 579.
 Jemdet Nasr, 186, 187, 193, 195, 233, 298, 315, 334, 371, 423, 429.
 Jemdet Nasr Period, 336, 337, 366, 402, 416, 424, 428, 430, 451, 458, 460, 484, 485, 663, 704, 741.
 Jemdet Nasr Pottery, 336, 361, 366, 376, 397, 425, 426, 430, 432, 433, 440, 453, 457, 725.
 Jerablus, 277.
 Jeremlah, 202.
 Jericho, 339, 399, 399², 401, 407, 409, 412, 444, 446, 447, 758.
 S. Jerome, 40.
 Jerusalem, 628, 663.
 Jerwân, 12, 335, 375, 629.
 Jews, 32, 41, 56, 584.
 Jinghis, 138.
 Jobba Hüyük, 298.
 Johann, Archduke, (Graz), 68, 80.
 Jökha, 54, 186, 270, 284, 367, 725.
 Jonah, 41, 47, 275.
 Jones, Harford, see Brydges.
 Jordan, 393.
 Josephus, 24⁴, 30⁶, 649.
 Judaldah, 314.
 Jullan the Apostate, 40.
 Jumjuma, 51.
 Jupiter (star), 689, 694, 695, 738.
 Jupiter Belos, 37.
 Justinus, Marcus Junianus, 351², 97.
 Kabaru, 11.
 Kabul, 117.
 Kadesli, 618.
 KA. DI, 490.
 Kahûn, 467.
 Kaiser-Wilhelm-Gesellschaft zur Förderung der Wissenschaften, 368.
 Kakzu, 340, 374.
 Kalah, see Kalhu.
 Kal'at Jarino, see Jarino.
 Kal'at Sharkât, 54, 160, 186, 270, 287, 291, 298, 299, 348-349, 577, 579, 590.
 Kalhu (Kalah), 185, 186, 331, 342-344, 586, 619, 629, 649, 704, 721, 723.
 Kanam, Kenya, 389.
 Kandahar, 117.
 Kandalanu, 632.
 Kanesh, 332¹, 507, 581, 582, 583, 587.
 Kanjera, Kenya, 389.
 Kapara, 451, 627.
 Kara-Su, 4, 446.
 Kara Yitagh, 377.
 Kardia, 25.
 Kar-Duniash, 619, 620.

- Karīm Shahr, 338, 380, 394, 398,
 401, 418, 439, 440, 447.
 Kār-Shamash, 519.
 Kār-Tukulti-Ninurta, 368, 619, 720.
 Karūn, 2, 34.
 Kashan, 757.
 Kashtliash, 619.
 Kašri, 646.
 Kašr Shemāmok, 340, 374.
 Kassandros, 27, 28.
 Kassite, 194, 198, 200, 338, 358, 377,
 442, 449, 450, 466, 468, 469, 470,
 471, 475, 476, 477, 478, 570, 574,
 576, 617, 619, 620, 651, 652, 653,
 654, 656, 661, 666, 668, 685, 697,
 719, 726, 727, 729, 734, 741.
 Kassites, 32, 449, 476, 477-478, 478,
 481, 484, 487, 505, 574, 576, 579,
 614, 615, 617, 620, 697, 719, 726,
 727, 729, 730.
 Kaula Kandal, 378.
kaunakes, 428, 666.
 Kazallu, 500, 501.
 Kenya, 386, 389.
 Kerimli Oglu, see Muhammed K. O.
 Kerkha, 2.
 Kermanshah, see Kirmānshāh.
 Khafājah, 309, 319¹, 321, 334, 335,
 369, 373-374, 413, 418, 423, 424,
 425, 428, 430, 433, 434, 438, 440,
 447, 485, 578, 640, 715.
 Khammurabi, see Hammurabi.
 Kharga Oasis, 756.
 Khiam, see El Khiam.
 Khirbet Kerak Pottery, 575, 576.
 Khirokitia, 401, 409, 755.
 Khorasan, 32.
 Khorsabad, 1, 65, 70, 86, 92, 93, 133,
 134, 135, 137, 140, 144, 145, 149,
 150, 152, 166, 182, 185, 186, 269,
 272, 287, 288, 289, 290, 291, 293,
 294, 297, 298, 299, 300, 302, 303,
 304, 305, 318, 320, 330, 331, 335,
 340, 341-342, 447, 626-627, 703,
 752.
 Khorsabad List, 342, 463, 471, 471-
 474, 475, 476, 478, 479, 480, 481.
 Khosr, 4, 11, 12.
 Khuzistan, 111, 286.
 Kibshuna, 602.
 Kidinnu, 739, 740.
 Kidnun, 371.
 Kifri, 405, 439.
 Kikia, 450, 580, 582.
 Kikiaenni, 580.
 Klmash, 505.
 King List (Khorsabad), see Khorsa-
 bad List.
 King List A, 325, 468, 476.
 Kingu, 688, 689.
 Kirkuk, 15, 186, 271, 390, 398, 403,
 407, 410, 415, 441, 452, 461, 486,
 615, 622, 716.
 Kirmānshāh, 89, 91, 108, 109, 112²,
 115.
 Kish, 30, 46, 52, 83, 186, 200, 280,
 298, 308, 312, 318, 326, 334, 335,
 337, 418, 430, 433, 434, 447, 456,
 457, 459, 486, 487, 490, 492, 493,
 498, 499, 501, 503, 509, 510, 516,
 570, 578, 587, 628, 691, 696, 704,
 730, 737.
 Kish III, 483, 542.
 Kish IV, 483, 486.
 Kishites, 335, 448, 485, 486, 487,
 488, 498, 499, 509, 512, 577, 579,
 580, 587.
 Kisilimu, 737.
 Kisiri, 11.
 Kisurra, 366.
 Kitlon, 68.
 Kizwatna, 618, 661.
 Konya, 277.
 Kostenski, (Don, Russia), 392.
 Kouyunjik Collection, 78, 167.
 Krateros, 26.
 Ksār 'Akil, 757.
 Kudur-Mabug, 513.
kudurru, 51, 77, 719, 728, 738.
 Ku-e, 603, 623.
 Kūl Tepe, 175, 186, 187, 208, 218¹,
 230, 332, 332¹, 507, 581-589.
 Kug-Baba, 542.
 Kullab, 646.
 Kulli, 447.
 Kumani, 602.
 Kumari, 646.
 Kummer, Ernst Eduard, 740.

- Kummuh, 600.
 Kunaxa, 3, 19.
 Kurdish, 286, 392.
 Kurdistan, Iraqi, 18, 81, 337, 391, 454, 638.
 Kurdistan, Persian, 111, 454, 638.
 Kurds, 84, 725.
 Kur-lil, 716.
 Kurnah, 2, 5, 287, 301-302, 310.
 Kûsi, 630.
 Kusura, 754.
 Kutalla, 54, 358.
 Kut Barrage, 13.
 Kût el-Amâra, 3, 7.
 Kutha, 10, 31, 364, 628, 684, 691.
 Kutî, 620.
Kutî, 687.
 Kuyunjik, 46⁶, 47, 54, 155, 163, 164, 182, 185, 186, 269, 273, 274, 275, 277, 285, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 310, 313, 316, 320, 330, 331, 335, 336, 337, 340, 341, 345-348, 355, 447, 720, 723.
 Kuzallî, 588.
 Labân, 614.
 Labartu, 706, 707.
 Labasu, 706, 707.
 Lachish, 319.
 Lagash, 2, 7, 9, 11, 236, 237, 244, 249, 262, 263, 264, 324, 332, 333, 334, 360, 376, 396, 423, 430, 433, 434, 437, 447, 483-496, 497, 498, 502, 503, 504, 508, 517, 528, 578, 650, 653, 657, 665, 690, 705, 712, 717, 718, 725, 728, 729, 745.
 Lagash Period, 376, 487-496.
 La'ipu, 498.
 Lajard, Félix, 84.
 Lake Van, see Van.
 lamassu, 627, 706, 722.
 Laodike, 31.
 Larak, 450, 452.
 Larnaka, 68.
 Larsa, 6, 7, 9, 11, 16, 54, 186, 206, 238, 280, 284, 358, 373, 414, 464, 483, 497, 510, 512, 513-514, 516, 520, 530, 533, 575, 578, 607, 639, 655, 685, 696, 719, 726, 751.
 Lasirab, 505.
 Latin, 119, 122, 153, 156, 179, 223, 226, 250, 265, 511.
 Law Code of Hammurabi, see Codex H.
 Lebanon, 18, 390, 501, 505, 614, 616, 660, 703.
 Levallois(ian), 387, 388, 391.
 Levallois-Mousterian, 391, 393, 394, 401.
 Libil-hegalla, 10, 645.
 Lilitu, 706.
 Lîlû, 706.
 Lion of Babylon, 49.
 Lipit-Ishtar, 529.
 Literary Society of Bombay, 110, 136.
 Lockett, Abraham, 51, 511, 69, 80, 82, 83.
 Louvre, see Musée du Louvre.
 Louvre Vocabulary, 731.
 Lucas, W., 341.2.5.6.8.
 Lucianus of Samosata, 19, 38, 39, 40.
 Lugal-anda(-nušûga), 187, 244, 483, 492, 495, 657, 663, 681.
 Lugal-dalu, 367.
Lugal-e ud me-lam-bi nir-gal₂ Series, 770.
 Lugal-zaggisi, 483, 488, 492, 497, 498, 499, 500, 503, 504, 506, 569, 676, 696.
 Lukka, 618.
 Lulubians (Lulubû), 449, 451, 487, 502, 503, 508, 718.
 Luristan, 111.
 Luya, 618.
 Lycia, 618.
 Lydian, 631, 634.
 Lyshmachos, 29.
 Macedonia, 25, 28, 31.
 Ma'dân, 286.
 Magan, 442, 502, 503, 660, 661.
 Magdalenian, 385, 386, 388, 389, 392.
 Magyar, 124.
 Mahâyâna, 114.
 Makhmur, 338, 378, 400, 403, 439.

- Makioubé, Makloubet, 49, 49¹.
Maḳlū Series, 708, 770.
 Makran, 447.
 Mal-Amīr, 125, 132, 134, 135, 176.
 Malcolm, John, 46, 66.
 Malgū, 464.
 Maltai, 289, 382.
 Manchu, 124, 176, 177, 232.
 Mandaeen, 212.
 Manishtusu, 198, 501, 508, 651, 658.
 Mannu-ki-Ashur, 582.
 Marathon, 66.
 Mardin, 78.
 Mardonius, 23.
 Marduk, 20, 22, 30⁶, 34⁹, 44, 307, 489, 504, 518, 520, 531, 532, 559, 570-573, 574, 620, 634, 635, 642, 645, 646, 673, 674, 675, 688-690, 691, 692-693, 694, 695, 695-697, 698, 700, 701, 702, 705, 707, 708, 711, 737.
 Marduk-nādin-aḥḫē, 476.
 Marduk (Nergal) Street, 641, 645, 646, 702, 704.
 Marhashi, 502.
 Mari, 185, 186, 280, 297, 335, 337, 339, 463-465, 466, 467, 468, 470, 471, 473, 474, 481, 483, 486, 500, 509, 513, 514, 578, 579, 582, 716, 758, 769.
 Marite, 509.
 Mars (star), 695, 738.
 Maruttash, 615.
 Masili, 11.
 Matarrah, 338, 340, 377-378, 389, 402, 403, 405, 406, 407, 412, 439, 455.
 Mattarah, see Matarrah.
 Matthaeus Parisiensis, 283.
 Maude, General Sir Stanley, 278, 305.
 Mausli, see Mosul.
 Mazaca, 582.
 Medaln, 324, 373.
 Medeia, 19.
 Medes, 19, 21, 89, 90, 125, 623, 625, 633, 634, 644, 724.
 Media, 27, 32, 33, 35, 105, 137, 146, 176, 633, 634, 661.
 Median, 97, 123, 124, 125, 126, 128, 129, 130, 634.
 Median-Persian, 140.
 Mediterranean, 390, 407, 410, 411, 426, 450, 458, 499, 501, 576, 614, 621, 622, 623, 624, 625, 753.
 Medo-Scythic, 125.
 Megiddo, 758.
 Mehri, 219.
 Meiendorf, 386.
 Melanesian, 232.
 Meleagros, 25, 26.
 Meluhha, 505, 660, 661, 662.
 Memphis, 26, 630.
 Menanu, 628.
 Menes, 435, 436, 437, 438, 484².
 Mercury (star), 738.
 Mergassur, 390.
 Merkes, 307, 324, 439, 638, 640, 641, 646, 684.
 Merodach-baladan, 625.
 Mersin, 339, 401, 404, 407, 409, 412, 419, 441, 444, 446, 447, 754.
 Merton College, Oxford, 347.
 Mesannipadda, 435.
 Meslim, 367, 490.
 Mesolithic, 337, 381, 386, 388, 389, 392, 394, 395, 399², 400, 401, 412, 418.
 Mespila, 19.
 Messene, 33, 34, 35.
 Metropolitan Museum of Art, New York, 344.
 Midas, 625.
 Middle Elamite, 132.
 Middle Susian, 132.
 Ministère de l'Instruction publique, France, 356.
 Minoan, 480.
 Mlynan Pottery, 376, 425.
 Mission Fulgence Fresnel, 302, 305.
 Missione Archeologica Italiana di Mesopotamia, 341, 374.
 Mitanni(an), 450, 452, 481, 505, 589, 598, 615-617, 617, 621, 623.
 Mitannu, 616, 617, 618, 619.
 Mitchell, Dr., 68.
 Mithras, 136⁴.
 Mithridates I, 32, 33, 35.
 Mithridates II, 34³, 36.
 Mitra, 615.

- M'lefaat, 381, 391.
 Mohammedans, 270, 275.
 Mohammedi ibn Sheikh Ibrahim, see Hamoudi.
 Mohammera, 2, 34.
 Mohenjo-daro, 500, 756.
 Mongol(ian), 124, 176, 177, 205, 232.
 Mongols, 3, 20, 124, 270, 271.
 Mon-Khmer, 232.
 Monsal, 41.
 Mons Argaeus, 582.
 Mosale, 546.
 Moslem(s), 273, 275, 281, 285.
 Mosul, 4, 13, 19, 41, 42, 43, 46, 47, 51, 55, 81, 267, 268, 269, 271, 272, 273, 274, 275, 276, 282, 285, 287, 288, 289, 290, 291, 293, 294, 296, 300, 310, 336, 402, 407, 411, 468, 583, 623.
 Mount Carmel, 337, 387, 388, 391, 400, 444, 460, 758.
 Mount Elvend, 81, 83, 84, 85, 89, 90, 91, 105, 108, 109, 109², 111, 113, 119, 126, 140, 147, 185.
 Mousterian, 385, 387, 391, 394.
 Münchhausen, Karl Friedrich Hieronymus, 74².
 Mugharet el-Kebarah, 758.
 Muhammed Kerimli Oglu, 271, 272, 273, 287.
 Mujellba, 49¹, 51.
 Muli, 588.
 Mummu, 688.
 Munshid ibn Hubaiyib, Sheikh, 288.
 Muntaliq, 286, 292.
 Muqalliba, 49¹.
 Muqayyar, 48, 54, 57, 64, 69, 270, 296, 357-358.
 Murâd-Su, 4.
 Murashû, 354, 662.
 Murghâb, 56, 78, 86, 88, 101, 101², 104, 108, 110, 140, 185.
 Murshilish I (Muršiliš), 478, 576, 614, 618.
 Musée du Louvre, Paris, 65, 92, 147, 185, 266, 267, 280, 291, 292, 293, 300, 302, 304, 332, 342, 348, 358, 361, 362, 373, 397, 731, 751.
 Musée Impériale, Paris, 65.
 Museo Etnografico-Preistorico, Rome, 65.
 Museo Kircheriano, Rome, 65.
 Muséum de la République, Paris, 65.
 Museum of the University of Pennsylvania, Philadelphia, 344, 357, 369, 370, 372, 374, 487, 751.
 Museum Praunianum, 68, 73.
 Mushki, 625.
 Mushkians, 600.
 Musri, 626.
 Musyan, see Tepe Musyan.
 Mutsal, (Al-), 41.
 Muwattallish, 618.
 Mycenae(an), 38, 409.
 Nabic-cudurray-ucher, see Nebuchadnezzar.
 Nabî Yûnus, 42, 43, 46, 47, 69, 87, 275-276, 285, 288, 289, 303, 355.
 Nabonid(us), 20, 20¹, 23, 166, 357, 359, 634, 635, 644, 645, 691, 697.
 Nabopolassar, 6, 20, 489, 633, 646, 647, 648, 701, 702.
 Nabû, 343, 347, 567, 592, 691, 697, 701.
 Nabû-apal-iddin, 719.
 Nabû-bêl-uşur, 586.
 Nabû-danina(n)ni, 586.
 Nabû-kudurri-usur (Nidintum-Bêl and Arahû), 21.
 Nabû-rimannu, 739.
 Naga-ed-der, 423.
 Nahum, 19.
 Nalri, 450, 620, 622, 623, 624.
 Naqsh-i-Rustam, 56, 60, 61, 62, 86, 88, 96, 118, 122, 126, 127, 142, 185.
 Nam-burâ-bi Series, 763.
 Namri, 586.
 Namtarru, 706, 707.
 Nana, 713.
 Nanibim, 588.
 Naplanum, 510.
 Napoleon I, 76.
 Napoleon III, 319.
 Naqada, 423, 435.
 Naql'a, 594, 595, 630, 631.
 Naram-Sin, 335, 337, 367, 449, 483, 499, 501-504, 505, 506, 507, 507¹,

- 508, 509, 569, 578, 579, 589, 655, 691, 718, 719.
 Nāsalya, 615.
 Nashatti, 615.
 Našibina, see Nisibis.
 Nāsiriya, 286.
 Nāsir Pasha, 286.
 Natušan(s), 337, 386, 389, 392, 395, 399², 400, 412, 460.
 Navarre, 41.
 Neanderthal, Düsseldorf, 385.
 Nearchos, 2.
 Nebekūiūchar, see Nebuchadnezzar.
 Nebuchadnezzar I, 620.
 Nebuchadnezzar 11, 7, 10, 20, 24, 24⁴, 29⁴, 39, 44⁵, 51, 52, 67, 68, 77, 80, 82, 83, 87, 92, 136⁴, 139, 142, 151, 156, 162, 163, 164, 166, 187, 206, 207, 209, 324, 353, 356, 358, 633-634, 638, 639, 640, 641¹, 642, 643, 644, 645, 646, 647, 648, 679, 698, 701, 702, 704, 720, 729, 739.
 Nebu-kudur-uššur, see Nebuchadnezzar.
 Negub, 12.
 Neolithic, 381, 386, 387, 389, 394, 395, 396, 399², 401, 406, 407, 410, 412, 418, 419, 437, 439, 441, 444, 446, 447, 458, 575.
 Neo-Sumerian, 183, 184, 726-727.
 Nergal, 592, 687, 691, 695.
 Nergal Gate, Nineveh, 282, 345.
 Nergal Street, see Marduk Street.
 Neriglissar, 7, 66, 166.
 Nestorians, 273.
 New Elamite, 126, 132.
 New Hittite Kingdom, 616-617, 618, 619, 620, 621.
 New Susian, 126, 132.
 New Year's Festival, see *Akitu* Festival.
Ni-bi-ru, 689.
 Nicaea, 739.
 Nicator, see Seleukos I.
 Nidinta-Bêl, 23.
 Nidintum-Bêl, 21.
 Niffer, see Nippur.
 Nihawand, 426, 757.
 Nile, 1, 4, 8, 442, 632, 661.
 Nîlgîrî, 662.
 NîM, 487.
 Nîmitti-Enlîlî, 643.
 Nîmrûd, 47, 47⁵, 55, 65, 70, 83, 92, 93, 133, 134, 135, 150, 185, 186, 190, 191, 199, 268, 269, 272-273, 275, 282, 287, 289, 290, 291, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 309, 311, 313, 330, 331, 338, 339, 340, 342-344, 447, 662¹, 721, 723.
 Nina, 489, 491.
 Nin-a-gai, 627.
 Nin-a-zu, 687.
 Nîneveh, 11, 12, 19, 37, 38, 39, 41, 42, 43, 43¹⁰, 46, 47, 53, 67, 82, 85, 86, 92, 135, 142, 144, 150, 157, 185, 186, 199, 267, 268, 269, 270, 275, 285, 295, 303, 331, 341, 345-348, 355, 403, 407, 423, 439, 440, 447, 502, 570, 577, 578, 589, 592, 614, 616, 626, 629, 631, 632, 633, 636, 639, 641, 662, 666, 671, 676, 691, 713, 717, 721, 723, 724, 737, 745, 752.
 Nineveh Pottery (cf. Billah Pottery), 337, 347, 376, 401, 403, 407, 419, 422, 425, 430, 431, 433, 440, 445, 447.
 Ninevite Period, 424, 425.
 Ninevite Pottery, see Nineveh Pottery.
 Nîngîrsu, 489, 490, 491, 493, 495, 496, 660, 690, 699.
 Nîn-gîsh-zî-da, 705.
 Nînharsag, see Nînhursag.
 Nînhursag (Nînharsag), 367, 489.
 Nîniue, see Nîneveh.
 Nîn-lîl, 592, 724.
 Nînmah, 646.
 Nînnî, 602.
 NîNNI. EŠ₂, 503.
 Nîn-sîkil, 251.
 Nînurta, 17, 592, 645, 691, 695, 696.
 Nîphauanda, see Nîhawand.
 Nîppur (Nuffar), 6, 7, 11, 14, 30, 1827, 183, 186, 241, 284, 287, 297, 298, 299, 304, 305-306, 313, 331, 333, 334, 338, 339, 341, 353-355, 452,

- 485, 486, 488, 497, 498, 499, 503, 504, 505, 506, 507, 508, 509, 510, 512, 516, 517, 519, 529, 539, 569-570, 571, 572, 575, 607, 650, 655, 662, 678, 684, 691, 692, 696, 698, 704, 723, 725, 726, 737, 751.
- Nlppur Vocabulary, 241, 731.
- Nipur, 594.
- Nisannu, 20, 691, 692, 693, 704, 709, 737, 738.
- Nisibis (Nasibina), 502, 622, 624, 630, 662.
- Nîš kâti Series, 770.
- Nocturestand, 61, 61².
- Notgemeinschaft der Deutschen Wissenschaft, 321, 350, 363, 364.
- Nubia, 441, 442, 660, 661.
- Nubian, 232.
- Nuffar, see Nlppur.
- Nusku, 592.
- Nuzu (Nuzi), 186, 218¹, 225, 230, 280, 308, 315, 318, 334, 370, 412, 422, 423, 424, 431, 440, 452, 486, 732.
- Nuzu Pottery, 425, 466, 468.
- Nuzu Vocabulary, 734.
- Oannes, 396.
- Obeld, see Ubald.
- Ochus, 104.
- Oghani, 58, 188.
- Old Elamite, 131.
- Old Hittite Kingdom, 575-576, 614.
- Old Persian, 63, 64, 70, 73, 74², 76, 79, 81, 84, 87, 88, 89, 91, 92, 94-123, 126, 127, 128, 135, 143, 149, 188, 198.
- Old Suslan, 125, 131.
- Old Testament, 19, 137, 141, 143, 151, 189, 512, 570, 584, 626.
- Olympia, 295.
- Olympias, 27, 28.
- Oman, 442, 661.
- Omar (Caliph), 270.
- Omayyads, 270.
- Opls, 634.
- Oriental Exploration Fund, University of Chicago, 367.
- Oriental Institute of the University of Chicago, 167, 293, 300, 305, 342, 369, 373, 374, 375, 376, 378, 379, 380, 381, 471, 472¹.
- Orontes, 314.
- osch Aksak, 97, 98, 100.
- Osmanli, 494.
- Ostia, 319, 319¹.
- Ottomans, 271.
- Onseley, Sir Gore, 67, 67², 71, 113.
- Pabilsag, 739.
- Palaeolithic, 337, 379, 380, 381, 385-389, 391, 392, 393, 394, 395, 396, 411, 412, 417, 418, 445.
- Palegawra, 338, 380, 390, 391, 392, 393, 394, 395, 398, 401.
- Palestine, 15, 32, 41, 286, 319, 323, 325, 337, 387, 389, 390, 391, 392, 393, 394, 401, 444, 456, 573, 576, 596, 616, 623, 624, 633, 647, 667, 758.
- Paliakopas, 9.
- Pallukat, 10.
- Pallukatu, 10.
- Palmyra, 621, 662.
- Pamir, 661.
- Pan-African Congress on Prehistory, Nairobi, 387.
- Parsi, 95, 96, 136, 140, 189.
- Parthia, 32.
- Parthian, 285, 341, 349, 370, 372, 374.
- Parthians, 30¹, 32, 33, 35, 36, 97.
- Pasargadae, 56, 88, 97.
- Pasitigris, 2.
- PA.TE.S1, 488-489.
- Patrokles, 29.
- Pausanias Periegeticus, 30², 38, 40².
- Pa-zend, 96.
- Peabody Museum, Harvard University, 370, 379.
- Peace of Sèvres, 277.
- Pehlevi, 95, 96, 96², 97, 98, 99, 101, 136, 162, 189.
- Pelthou, 28.
- Pelthou (Agenor's son), 27, 28.
- Peloponnesus, 28.
- Penguin Books, Ltd., 344.
- Percy Sladen Memorial Fund, Oxford, 347.
- Perdikkas, 25, 26.

- Persepolis (Persepolitan), 27, 43, 48, 49, 49⁴, 50, 52, 55, 56, 57, 57², 58, 59, 60, 61, 61², 62, 62², 63, 63², 64, 65, 65¹, 67², 70, 71, 71², 72, 73, 78, 85, 86, 87, 88, 90⁶, 94, 96, 97, 103, 105, 108, 111, 113, 115, 116, 118, 119, 120, 121, 122, 124, 126, 127, 129, 132, 133, 134, 135, 136, 137, 138, 139, 411, 142, 144, 153, 157, 185, 266, 283, 415, 757.
- Persia, 19, 30, 32, 33, 53, 55, 57, 57², 58, 59, 61², 62, 64, 65, 71, 105, 108, 109, 111, 115, 117, 125, 137, 152, 162, 396.
- Persian, 61, 64, 72, 73, 99, 108, 110, 111, 112, 114, 115, 117, 119, 120, 122, 123, 125, 126, 129, 135, 136, 137, 140, 142, 143, 147, 148, 152, 156, 158, 162, 180, 198, 237, 270, 271, 286, 354, 447, 574, 632, 635, 664, 680, 694, 716.
- Persian Gulf, 1, 5, 7, 54, 396, 404, 442, 451, 499, 500, 575, 625, 629, 655, 661, 662, 676, 696.
- Persians, 19, 32, 40, 56, 96, 98, 189, 625, 633, 634, 644, 691.
- Persis, 757.
- Petra tou Limniti, 401.
- Pharaoh(s), 186, 585, 596, 615, 616, 617, 618.
- Philip III, 56.
- Phlilippos Arrhidaios, 25, 26, 27, 28.
- Phillipps, Sir Thomas, 68, 87.
- Phlistine, 628.
- Phoenician, 628.
- Phrakes II, 32¹, 33, 35, 36.
- Pitldown, 325, 389.
- Pindarus, 39¹.
- Pittit, 35.
- Plano-convex Period, 432, 433, 453, 459.
- Platanos, 463, 480.
- Pleistocene, 387, 389, 441.
- Pllny, 37, 38, 737.
- Plutarch, 25, 27.
- Pollcha, 90¹.
- Polyblus, 35.
- Polynesian, 232.
- Poly(s)perchon, 27, 28.
- Poonah, 110.
- Porte, The, 54, 272, 274, 281, 290, 292, 293, 295.
- Porte du Bois, Abbeville, 385.
- Posidonius of Apameia, 35.
- Pfedomost, 389, 459.
- Pre-Hittites, 582.
- Pre-Indo-European(s), 500, 508, 575.
- Pre-literate Period, 455.
- pre-Sargonic, 237, 238, 250, 252, 262, 263, 264, 366, 367, 653, 654, 665.
- pre-Sumerian, 452, 455, 462.
- Pre-Sumerians, 454, 456, 461, 462.
- Prince Consort, The, 295.
- Proto-Elamite(s), 131, 434, 435, 450, 502.
- Proto-literate Period, 381, 394, 424, 425, 441, 455, 458, 460, 715, 716.
- Proto-Sumerians, 462.
- Ptolemies, 26.
- Ptolemy, Claudius, 26, 28, 29, 147.
- Pulu, 625.
- Purlin, 584.
- Puzur-Ashur II, 582.
- Puzurishi-Dagan, 369.
- Pyramid(s), 37, 52, 56, 57, 61, 436.
- Pythagorean, 743.
- Qasr, 49¹, 50, 51, 53, 54, 268, 285, 351.
- Qumquana, 51.
- Râblsu, 706.
- Raldau Sharqi, 414, 422, 440.
- Ramadi, 13.
- Rameses II, 618.
- Raphael, O. C., 347.
- Rapiku, 519.
- Ras Shamra (Ugarit), 186, 198, 274, 298, 339, 452, 463, 468, 471, 480, 481, 482, 758.
- Rawa, 13.
- Raymond, M., 66.
- Ready, Robert Cooper Walpole, 312.
- Red Sea, 442, 661, 662.
- Rhodes, 619.
- "Riemchen", 428, 433, 436.
- Rig-Veda, 122.
- Rim-Sin, 6, 11, 464, 513-514, 515, 530, 577, 578, 696.

- Rimush, 500, 501, 502, 578, 661, 698.
 Riss, 391, 393.
 Roman(s), 30¹, 32, 40, 319, 546, 567, 664.
 Rome, 585.
 Rousseau, M., 66.
 Rowanduz, 13, 380, 390, 400.
 Roxana, 25, 26, 27, 28.
 Royal Asiatic Society, London, 78, 78², 112, 113, 117, 118, 121⁴, 130, 154, 155, 159, 160, 164, 176.
 Royal Cemetery (Tombs) at Ur, 280, 324, 329, 358, 417, 428, 435, 458, 460, 482, 745.
 Royal Irish Academy, 120, 152.
 Royal Society (British), 59, 60, 61.
 Russell, Bertrand, 740.
 Russell, Lord John, 295.
 Russia, 392, 393, 394.
 Rzewusky, Count Wenceslaus, 68, 80.
 Sabitu, 677, 679, 745.
 Sabum, see Zabum.
 Safawids, 271.
 Sagirrina Dagħ, 391, 398.
 Sahana, 90¹.
 Sahara, 390.
 Sakee Gözü, see Sakje Geuzl.
 Sakhu, 702.
 Sakian, 124.
 Sakje Geuzl, 339, 446, 759.
 Salamis, 23.
 Salt, Mr., 67, 85.
 Saltu, 574.
 Samaritan, 61.
 Samarra, 2, 13, 15, 333, 368, 390, 396, 439, 500.
 Samarra Pottery, 377, 378, 402, 404, 405-406, 406, 408, 411, 416, 418, 439, 445, 452, 455, 460-461.
 Sammuramat, 594, 623-624.
 Samsu-ditana, 469, 481, 515.
 Samsu-iluna, 237, 468, 469, 471, 476, 477, 478, 574, 575, 578, 590, 613.
 Sandwich, Dr., 295.
 Sanskrit, 97, 104, 107, 114, 115, 119.
 Saqqara, 423.
 Sarak, 141.
 Sarangia, 106.
 Sardanapalus, 188.
 Sardis, 23.
 Sardon, 149.
 Sargon (I) of Agade, 198, 200, 202, 218, 335, 417, 417¹, 425, 434, 435, 438, 439, 442, 449, 450, 486, 498-501, 503, 508, 509, 528, 569, 578, 579, 580, 582, 588, 590, 691, 717.
 Sargon (II), 68, 141, 146, 149, 289, 320, 331, 339, 342, 344, 524, 600, 602, 604, 605, 606, 607, 614, 625-628, 649, 660, 661, 703, 720, 768.
 Sargonle, 323, 438, 500, 640, 666.
 Sarmatic, 686.
 Sarpanitum, 645, 690, 692, 711.
 Sassanian, 61, 97, 100.
 Sassanids, 33, 40, 97, 270.
 Saturn (star), 695, 738.
 Saushshatar, 616.
 Scarlet Pottery, 376, 425, 426, 431, 432, 433, 440.
 Scythian (Scythic), 97, 124, 125, 129, 130, 135, 163, 164, 176, 177, 686.
 Scyths (Scythians), 32, 35, 107, 124, 176.
 Scyths, Babylonian, 164, 176.
 Sea-Land Dynasty, 484, 575, 576, 614, 617.
 Sebeknefrure, 467.
 Sebillian, 388.
 Seleucia, 30, 30¹, 33, 34, 35, 36, 36⁶, 37, 38, 53.
 Seleucid(s) (Seleucian(s)), 21, 24, 26, 30, 31, 32, 33, 37¹, 187, 197, 198, 218¹, 350, 372, 740.
 Seleukos I Nicator, 25, 26, 27, 28, 29, 29⁴, 30, 36, 37¹, 38.
 Seleukos II, 21, 31, 701.
 Semiramis, 89, 188, 594, 624.
 Semites, 180, 181, 336, 397, 448, 449, 450, 452, 453, 454, 455, 455², 466, 457, 458, 461, 486, 498-499, 510, 511-512, 528, 533, 577, 621, 718.
 Semitic, 129, 136, 137, 141, 143, 144, 145, 149, 150, 154, 161, 165, 175, 176, 180, 181, 182, 189, 190, 202, 205, 206, 208, 209, 210, 211, 212, 214, 216, 218, 219, 220, 221, 222, 223, 225, 226, 245, 254, 332, 335,

- 420, 447, 448, 451, 453, 457, 458, 486, 498, 499, 503, 507, 509, 511, 512, 513, 516, 536, 569, 570, 577, 579, 580, 588, 621, 623, 642, 667, 694, 709, 717, 718, 719, 722, 741.
- Semitic Museum, Harvard University, 370.
- Senjirli, 307, 630, 649.
- Senkereh, 16, 54, 270, 284, 296, 312, 358.
- Sennacherib, 2, 10, 11, 12, 20, 47, 69, 70, 81, 87, 155, 160, 199, 214, 224, 229, 275, 276, 289, 300, 331, 335, 345, 346, 347, 355, 375, 476, 477, 594, 596, 597, 600, 604, 614, 628-630, 631, 632, 639, 641, 641², 642, 646, 653, 666, 692, 701, 702, 704, 723, 725, 768.
- Septimius Severus, 33, 36⁶.
- Sesostris I, 467.
- Sesostris II, 467.
- Sesostris III, 467.
- Sèvres, 444.
- Shabâtu, 737.
- Shadûnu, 724.
- Shah-tump, 460.
- Shah Tepe, 757.
- Shalim-ahum, 582.
- Shalmaneser I, 331, 465, 472, 598, 619, 629.
- Shalmaneser II, see Shalmaneser III.
- Shalmaneser III, 4², 5, 90, 155, 285, 343, 348, 362, 584, 588, 600, 601-602, 606, 622-623, 721.
- Shalmaneser V, 606, 625.
- Shamash, 520, 531, 532-533, 540, 587, 592, 619, 672, 696, 698, 702, 719, 770.
- Šamaš-erba, 21, 21⁵.
- Shamash-hâšir, 520.
- Shamash-hegallum, 516.
- Shamash-shum-ukin, 595, 631, 646.
- Shamiramatti, 441.
- Shammar, 286, 287.
- Šamši-Adad (Hammurabi Period), 463, 464, 465, 471, 472, 473, 474, 480, 513.
- Shamshi-Adad (Kassite Period), 614, 617, 621, 659.
- Shamshi-Adad V, 343.
- Shanidar, 293, 338, 381, 390, 391, 392, 393, 394, 395, 401, 412, 418, 439, 441, 444.
- Shapur I, 33, 40, 97.
- Shara, 376.
- Shargalisharri, 504.
- Sharrukin I of Assur, 582.
- Shatt el-Arab, 5, 302.
- Shatt el-Hal, 2, 7.
- Shatt el-Kâr, 10, 303.
- Shatt en-Nîl, 10.
- Shebeks, 285.
- Šêdu, 706, 722.
- Shem, 137.
- Sherif Khân, 355.
- Shibaniba, 344.
- Shih Huang Ti, 497.
- Shirâz, 56, 82, 85, 268.
- Shkafi Shanidar, see Shanidar.
- Shub-ad, 16, 288, 311, 482, 509, 686-686, 717, 745, 759.
- Shubandi, 615.
- Šubarl, see Subarl.
- Shugalla, 588.
- Shuitungkou, 388.
- Shukbah, 758.
- Shulgi, 178, 369, 483³, 506-508, 509, 655.
- Shumer, see Sumer.
- Shumir (ethnic name of Babylonian Scyths), 176.
- Šumma-lâ-illja, 519.
- Shuppiluliumash (Šuppiluliumaš), 478, 616, 617, 619.
- Shurlash, 615.
- Šurpu Series, 671, 708, 770.
- Shuruppak, 6, 365-366, 450, 452, 485, 638.
- Shushan, 646.
- Shu-Sin, see Gimil-Sin.
- Shutarna, 615, 616.
- Shutruk-Nahhunte I, 620.
- Shuwardata, 615.
- Slalk, 339, 403, 415, 417, 418, 419, 420, 434, 442, 443, 443¹, 445, 446, 455, 457, 458, 459, 654, 757.
- Sidon, 628.
- Sigelon, 283.

- Sīmānu, 709, 737.
 Sīmash, 509.
 Simesi, 601.
 Simon, James, 365.
 Simon, L., 365.
 Sin, 321, 374, 413, 424, 434, 438, 497, 592, 595, 634, 697.
 Sinal, 441, 442, 502, 630.
 Sind, 28.
 Sin-gāshid, 659.
 Sin-iddinani (King of Larsa), 238, 528.
 Sin-iddinani (Vicegerent in Southern Babylonia), 519, 520.
 Sinjar, 1, 273, 287, 376, 390.
 Sinkara, see Senkerek.
 Sin-ki-ram, see Sennacherib.
 Sin-muballit, 464, 469.
 Sippar, 3, 6, 7, 9, 10, 186, 199, 206, 274, 284, 311, 312, 313, 331, 364, 486, 498, 501, 516, 519, 531, 533, 607, 634, 678, 698, 702, 719, 723, 726, 737, 739.
 Sirius, 738.
 Sirku, 662.
 Sīrūsh, 704.
 Skhul Cave, Mt. Carmel, 388.
 Skinner, Mr., 57.
 Sladen Memorial Fund, London, 372.
 Smithsonian Institution, Washington, 381.
 Snofru, 437.
 Société Asiatique, Paris, 112, 113, 268.
 Société d'émulation, Abbeville, 385.
 Société française de numismatique et d'archéologie, 177.
 Society of Antiquaries, London, 153, 347.
 Sofuk, 286.
 Sogdiana, 106.
 Soghuk Su Hüyük, 404.
 Solutrian, 385, 389.
 Somme, 385.
 South Africa, 386.
 Spasinos, 341.
 Spasinou-Kharax, 34.
 Stele of Vultures, 360, 361, 487, 489, 490, 717.
 Steuart, Mr., 69.
 Strabo, 2, 3, 8, 9, 224, 24, 321, 37, 38, 39, 402, 188, 639, 649, 652.
 Stratford de Redcliffe, Lord, see Canning.
 Subarale, 450, 451, 452, 491, 505, 580, 583.
 Subari, 449, 620.
 Subarians, 397, 448-449, 449, 449-452, 456, 457, 461, 579, 581, 615.
 Subartu, 449, 450, 499, 502, 503, 505, 508, 525.
 Su-bir4, 450, 505.
 Sudanese, 232.
 Suez, 54.
 Suez Stone, 76, 92.
 Suhlij, 13.
 Sulaimanlyah, 81, 390, 503.
 Sultan Tepe, 186.
 Sumer (South Babylonia), 178, 486, 487, 488, 490, 491, 497, 498, 499, 501, 503, 504, 505, 506, 508, 514, 515, 529, 570, 572, 579, 580, 583, 584, 619, 620, 696, 764.
 Sumerian, 128, 145, 163, 164, 169, 170, 1711, 175-185, 185, 187, 190, 192, 196, 198, 200, 201, 202, 203, 206, 208, 209, 212, 222, 223, 232-265, 292, 297, 332, 373, 374, 413, 429, 452, 453, 454, 455, 461, 486, 488, 501, 503, 504, 506, 507, 508, 509, 510, 511, 512, 520, 528, 529, 583, 614, 689, 694, 696, 723, 729-734.
 Sumerian Culture, 426, 429, 447, 461-462, 488-496, 498, 499, 506-509, 511-512, 520, 521, 524, 525, 526, 528, 529, 530, 569-570, 573, 578, 579, 586, 588, 590, 598, 622-623, 654, 663, 666, 667, 668, 681, 685, 686, 691, 693, 696, 703, 709, 715, 716-718, 719, 722, 725, 726, 729, 741, 745-746, 764.
 Sumerians, 17, 177, 181, 190, 196, 203, 205, 231, 232, 234, 332-333, 334, 335, 336, 337, 338, 339, 397, 448, 449, 450, 451, 452-462, 486, 505, 506, 509, 510, 511-512, 524, 525, 533, 577, 582, 584, 594, 622-

- 623, 635, 676, 694, 696, 719, 729,
734, 741, 745, 746.
Sumu-abu(m), 448, 464, 467, 469,
512, 513, 516, 643.
Sumu-la-ilum, 464, 469, 516, 518,
530, 568, 572, 575, 643.
Surghûl, 297, 307, 313, 365, 683.
Susa, 27, 89, 124, 125, 131, 135, 136,
185, 186, 326, 332³, 396, 418, 423,
443², 487, 502, 503, 515, 531, 533,
601, 654, 718, 756, 757.
Susa I (A) Pottery, 315, 336, 397, 402,
405, 408, 416, 443², 445, 456, 460,
487, 714, 756, 757.
Susa B Pottery, 443, 443², 445.
Susa II (C) Pottery, 326, 336, 397,
430, 434, 443², 456, 487, 502.
Susa D Pottery, 425, 426, 443².
Suslan, 63, 70, 76, 86, 87, 88, 89, 91,
117, 123-132, 135, 140, 146, 151,
155, 158, 176, 177, 188, 198.
Suslanla (Suslana), 125, 137, 757.
Swanscombe, Kent, 389.
Syncellus, Georglus, 306, 147⁵.
Syria(n), 15, 18, 26, 54, 61, 186, 198,
274, 307, 316, 325, 335, 336, 337, 339,
390, 393, 397, 409, 410, 453, 456,
466, 467, 468, 502, 575, 576, 580,
584, 587, 596, 607, 615, 616, 617,
618, 621, 624, 625, 633, 647, 756.
Tabae, 32.
Tabat, 16, 442, 623, 661.
Tabbat Al-Hammam, 759.
Tâbi-utul-bêl, 678, 678¹, 710, 725, 728.
Tabun (Mount Carmel), 391, 444.
Tadmur, 41, 621, 662.
Taharka, see Tarḳû.
Tahunian, 399².
Talma, 634.
Takht-i-Jamshîd, 55-56, 56, 87, 90,
94.
Tak-Kesré, El, see Ctesiphon.
Tall-i-Bakun, see Bakun.
Tamerlane, 20.
Tammuz, 687, 693, 737.
Taḳ-i-Kesra, see Ctesiphon.
Tarbîsu, 355.
Tardenoisian, 388, 392, 394.
Tarki, 62³.
Tar Kshaiḳe, 391.
Tarḳû, 630.
Tarku Inscription, 62³, 62-63, 63, 71.
Tarsus, 404, 582, 623.
Tashritu, 586, 644, 649, 650, 691, 737.
Tasians, 460.
Tasker, Mr., 153.
Tassle, James, 74.
Taurus, 4, 422, 428, 441, 445, 499,
501, 588, 660.
Tayaclan, 389.
Taynat, 298.
Taylor, Colonel John, 66, 69, 91,
112², 117.
Taylor Cylinder, 69, 69³, 87, 134, 214,
224, 229.
Tchoga-Zanbil, see Choga-Zambll.
Tebitu, 737.
Te-e, 646.
Tehrân, 108, 112, 115, 161.
Telgnmouth, John Shore Baron, 99.
Telspes, 111.
Telipnuš, 479.
Tell Abû Harmal, 186, 199, 206, 283,
298, 338, 339, 350, 529, 751, 766.
Tell Agrab, 375, 425.
Tell Aḥmar, 759.
Tell Aḳrah, 378.
Tell Al Dhlba'l, 377.
Tell Al Laham, 359.
Tell Al 'Ubaid, 278, 280, 298, 334,
336, 337, 369, 397, 402, 421, 422,
433, 440, 457, 636, 715, 716, 717.
Tell Arpachlyah, see Arpachlyah.
Tell 'Ashârah, 614.
Tell Asmar, 280, 309, 334, 335, 373,
424, 425, 428, 430, 433, 434, 440,
509, 578, 638, 638¹, 640, 668, 716,
717.
Tell 'Aṣhânah, 186, 280, 314, 328¹,
335, 463, 466, 467, 468, 480, 481,
482, 649², 720.
Tell Barghnihiât, 374.
Tell Billah, 297, 344, 416, 417, 425,
468.
Tell Brak, 280, 337, 376, 405, 407,
430, 466, 468, 470, 502, 755.

- Tell Daillam, 363.
 Tell Durailhim, see Drehem.
 Tell el-'Abyad, 377.
 Tell el-Amarna, 186, 218¹, 230, 332, 452, 615-617, 617¹, 621, 661, 728, 769.
 Tell-el-Hesi, 319, 444.
 Tell es-Sultân, see Jericho.
 Tell Halaf, 298, 339, 378, 407, 408, 446, 451, 598, 615, 627, 649, 756.
 Tell Halaf Pottery, see Halaf.
 Tell Hariri, see Marl.
 Tell Harmal, see Tell Abû Harmal.
 Tell Hassuna, see Hassuna.
 Tell Ibrâhîm, 364.
 Tell Ibrâhîm Bayls, 378, 400, 403, 439.
 Tell Judaldah, 298, 320¹, 423, 435.
 Tell Koshi, 376.
 Tell Mohammed, 350.
 Telloh (Tell-Lôh), 7, 53, 183, 186, 282, 284, 286, 288, 292, 313, 332, 333, 334, 335, 337, 339, 340, 360-362, 418, 422, 424, 425, 440, 447, 489, 667, 728.
 Tell Sifr, 54, 270, 303, 358.
 Tell 'Uqair, see 'Uqair.
 Tell 'Umalr, 372.
 Temen-bar II, see Shalmaneser II.
 Ten Tribes, Israelite, 90, 602.
 Tepe Gawra, see Gawra.
 Tepe Giyan, 339, 418, 419, 757.
 Tepe Hissar, 329, 339, 418, 431, 443, 445, 757.
 Tepe Musyan, 418, 423, 756.
 Tepe Shenshi, 375.
 Tepe Sialk, see Sialk.
 Tersan, Ch. Ph. Champion de, 66, 80.
 Terssant, see Tersan.
 Teshri, 586.
 Thebes (Egypt), 38.
 Thothes IV, 616.
 Thrace, 29.
 Thucydides, 188.
 Tiâmat (*ti'dmtu*, st. c. *ti'dmat*; *tdmtu*), 571, 572, 573, 673, 675, 688, 689, 691, 692, 693, 705, 737.
 Tibeto-Burmese, 232.
 Tiglathpileser I, 16-17, 78, 78², 160, 161, 214, 291, 347, 348, 390, 590, 593, 594, 596, 597, 599, 600, 602, 620-621, 655, 726, 767.
 Tiglathpileser III, 199, 343, 586, 600, 602, 606, 607, 618, 624-625, 625, 626, 631, 649, 767.
 Tigris, 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 15, 19, 30, 33, 34, 35, 41, 43, 54, 55, 269, 277, 286, 299, 301, 302, 303, 330, 396, 402, 455, 456, 486, 491, 500, 502, 614, 634, 689, 690.
 TPimutusu, 35.
 Tikrit, 301.
 Til-Barsip, see Tell Ahmar.
 Tillke Tepe, 441.
 Tilly, 11.
 Tlmarchos, 32, 33.
 Thnür-Leng, 271.
 Tirlgan, 506.
 Tırka, 614.
 Tishritu, 520.
 TPû, 706.
 Tlabarnash, 576.
 Toledo Museum of Art, Ohio, 372.
 Tower of Babel, 44, 45, 48, 53.
 Town(e)ley, Charles, 67, 75.
 Trajanus, 30¹, 33, 319¹.
 Transcaspla, 456.
 Transcaucasia, 442, 454, 455, 486.
 Trincomalee, 301.
 Triparadelsos, 26, 27.
 Troy, 39, 283, 295, 426, 754.
 Trustees of the British Museum, 273, 274, 294, 295.
 Trustees of the University of Pennsylvania, Philadelphia, 306¹.
 Tschil minâr, 56¹.
 Tudela, 41.
 Tukrish, 614.
 Tukultî-Ninurta I, 75, 76, 76¹, 465, 472, 578, 619-620, 720.
 Tukultî-Ninurta II, 622, 720, 767.
 Tulûl Al 'Aqlr, 298, 368.
 Tummumu, 519.
 Tunnel, see Taurus.
 Tupilash, 373, 485.
 Turanian, 124, 125, 163, 176, 178.
 Turco-Persian Frontier Commission, 349.

- Turkey, 64, 269, 400, 494.
 Turkish, 114, 124, 128, 177, 232, 276, 277, 286.
 Turkistan, 31.
 Turks, 3, 50, 270, 271, 272, 275, 336.
 Turushpa, 624.
 Tushratta, 616, 617.
 Tuwaiba, 286.
- Ubabu, 519.
 Ubaid Culture, 336, 389, 396, 402, 419-422, 426, 427, 430, 431, 432, 434, 440, 454, 455, 458, 460, 460-462.
 Ubaid Period, 360, 413, 416, 423, 424, 431, 441, 443, 445, 453, 460, 485, 486, 487, 637, 715.
 Ubaid Pottery, 336, 337, 358, 361, 369, 378, 379, 405, 406, 407, 408, 410, 411, 412, 413, 414-415, 416, 417, 422, 423, 431, 432, 440, 445, 456, 714.
 Uganda, 386.
 Ugarit, 186, 274, 401, 407, 409, 444, 446, 447, 452, 480.
 Ugbara, 644-645.
 Ugric, 178.
 Ugro-Tartarian, 124.
 'Ukair, 186, 298, 338, 376, 414, 420, 421, 422, 423, 424, 425, 428, 440, 443, 455.
 Ulai, 601.
 Ulûlu, 30, 520, 650, 709, 737.
 Umma, 54, 284, 367, 487, 488, 490, 497, 500, 505.
 Ummapishtim, see Utnapishtim.
 University of Durham, 344.
 University of Harvard, Cambridge, U. S. A., 370.
 University of Michigan, 372, 380, 381.
 University of Oxford, 356, 369, 371, 374.
 University of Pennsylvania, Philadelphia, 354, 365.
 Unki, 624.
 Ur, 2, 6, 7, 9, 17, 48, 54, 69, 186, 187, 193, 195, 238, 280, 288, 296, 297, 298, 299, 308, 311, 313, 316, 317, 320, 321, 323, 324, 329, 334, 335, 336, 337, 357-358, 396, 397, 402, 413, 417, 421, 422, 423, 424, 425, 428, 433, 440, 443, 447, 457, 458, 460, 482, 484, 486, 487, 488, 497, 500, 501, 502, 504, 506, 509, 510, 520, 578, 607, 636, 639-640, 640, 641, 683, 684, 685-686, 691, 696, 697, 704, 712, 714, 725, 726, 745, 769.
 Ur 1, 17, 396, 434, 435, 437, 482, 483, 484, 487, 488, 489, 598, 668, 685-686, 716-717, 745.
 Ur 11, 483.
 Ur 111, 20, 187, 198, 200, 237, 245, 284, 358, 366, 367, 412, 413, 417, 435, 477, 483, 484, 496, 506-509, 510, 513, 520, 528, 529, 538, 539, 569, 578, 579, 580, 581, 582, 583, 584, 653, 655, 659, 667, 684, 691, 712, 718, 737, 741, 751, 753, 759.
 Ural-Aitaic, 124, 131, 178, 180, 232.
 Urartacans, 451.
 Urartu, 198, 450, 586, 605, 622, 623, 624, 625, 626, 630, 631.
 Urbilium, 584.
 Urfah, 78, 186.
 Ur-Lugalbanda, 581, 583.
 Urmia, 419, 662.
 Ur-Nammu, 483⁴, 506, 528, 704, 718.
 Ur-Nanshe, see Ur-Nina.
 Ur-Nina (Ur-Nanshe), 197, 198, 396, 434, 437, 483, 483³, 484, 487, 489, 491, 492, 493, 593, 666, 705, 718, 729.
 Ur-Ningirsu, 362, 483.
 Ursus major, 738.
 Uruk, 2, 6, 7, 24, 30, 54, 186, 187, 193, 195, 232, 334, 335, 336, 337, 338, 349-350, 402, 421, 422, 423, 424, 425, 427, 428, 430, 433, 434, 435, 436, 438, 439, 440, 441, 451, 453, 454, 497, 498, 503, 504, 505, 506, 510, 517, 519, 520, 569, 570, 571, 575, 607, 636, 659, 676, 677, 691, 695, 696, 698, 704, 713, 725, 726, 737, 739, 764.
 Urukagina, 187, 483, 488, 489, 490, 491, 492-495, 496, 528, 653, 681.
 Uruk Period (see also Warka Cul-

- ture), 412, 413, 416, 424, 453, 455, 456, 459, 484.
 Uruk Pottery, 361, 376, 378, 379, 397, 422-424, 425, 426, 432, 440, 443, 445, 456, 457, 461.
 Uruwua, 615.
 Ush, 490.
 Ushanahuru, 630.
 Ushpia (Aushpia), 450, 580, 582.
 Ušum-gal-kalam-ma, 745.
 Usko, Hrr. Senator, 68.
 Utnapishtim, 671, 676, 678, 682, 683, 725, 728.
 Utu-hegal, 483, 505, 506, 512.
Utukki limnûti Series, 770.
 Utukku, 706, 707.
 Valni, Prieur, 75.
 Van, 623, 84, 85, 92, 105, 119, 133, 134, 135, 141, 144, 147, 149, 274, 286, 441, 447, 499, 614, 622, 624, 626, 660.
 Varuna, 615.
 Vendidad, 96.
 Venezia Vase, 86, 92, 146.
 Venus (star), 694, 695, 738.
 Versailles (Galerie des Glaces), 648, 702.
 Verulamium, 283.
 Verus, Lucius Aelius, 301, 33.
 Vézère, Dordogne, 385.
 Vikovich (Russian Agent), 108.
 Volga-Finnish, 124.
 Wādī Brissah, 6981.
 Wādī Dhobai, 758.
 Wādī Tharth, 13.
 Warad-ilishuar, 540.
 Warad-Sin, King of Larsa, 513, 516.
 Warad-Sin, son of Eribam, 519.
 Warka, 54, 270, 280, 284, 285, 296, 297, 298, 299, 312, 321, 326, 349-350, 414, 529.
 Warka (Uruk) Culture (Period), 425-432, 433, 434, 435, 436, 440, 442, 443, 445, 448, 451, 453, 454, 455, 457, 459, 460-462, 637, 663, 712, 715.
 Washshukkanni, 615, 617.
 Waziristan, 755.
 Weld(-Blundell), Herbert, 356, 369, 371, 374.
 Wentzel-Heckmann Stiftung, Elise, 368.
 West Semitic, 35, 210, 212, 214, 219, 448, 509, 573.
 Wilhelm 11, 307.
 Willendorf (Austria), 392.
 Williams, Colonel W. F., 349.
 Wolfe Expedition, Catherine L., 313.
 Würm, 388, 391, 392, 393, 3931, 394.
 Wuswas, 349, 350.
 Xenophon, 3, 19, 669.
 Xerxes, 21, 214, 22, 23, 24, 30, 349, 712, 73, 76, 83, 84, 85, 86, 92, 100, 101, 102, 104, 105, 109, 1092, 110, 111, 140.
 Xerxes Vase, see Caylus Vase.
 Yabrud, 759.
 Yaght-Lim, 463, 464.
 Yahdun-Lim, 464, 465.
 Yale Vocabulary, 731.
 Yamutbal, see Emutbal.
 Ya'qûbî, 42.
 Yâqût, 42, 45, 108.
 Yasmah-Adad, 463, 464, 465.
 Yasna, 105, 113, 115.
 Yorgan Tepe, 370, 486, 732.
 Yûmûk Tepe, 404, 754.
 Zâb, Greater, 13, 338, 381, 390, 400, 619.
 Zâb, Lesser, 1, 3, 13, 338, 400, 622.
 Zababa, 587.
 Zabum, 464, 469, 582, 701.
 Zagros, 381, 391, 398, 418, 422, 461, 462, 503, 505, 615, 632.
 Zakûtu, 594, 630.
 Zarar, 450, 452.
 Zârlûm, 578.
 Zarzi, 13, 337, 372, 380, 381, 390, 391, 392, 393, 394, 395, 398, 400, 401, 410, 418, 439.
 Zend, 95, 96, 962, 97, 98, 99, 100, 101, 104, 107, 115, 119, 136, 189.
 Zêr-Bânîtum, 645, 692.

Zeus, 37, 89.

Zibbar, 390.

ziggurat(s), 10 (Babylon), 52 (Ker Porter's Theory), 269 (Nimrûd), 321 (Ur), 333 (Nippur), 334 (Ur, Kish, Uruk), 338 (Dûr-Kurigalzu), 343 (Nimrûd), 350 (Uruk), 352 and 353 (Birs Nimrûd), 354 (Nippur), 356 (Kish), 357 (Ur), 358 (Ur, Senkerek), 360 (Eridu), 364 (Sippar), 365 (Al Hibbah), 367 (Bismâya), 368 (Tulûl Al 'Aķir), 372 (Tell 'Umair), 377 ('Aķar Kuf), 412 (Eridu), 413 (Eridu), 423 (Uruk),

424 (Uruk, Ur), 426 (Uruk), 427 (Uruk, Eridu), 428 (Uruk), 453, 696 (Eridu), 700 (Babylon), 702-703 (Babylon), 703 (Birs Nimrûd, Khorsabad), 704, 715, 737, 764.

Zimblir, 450, 452.

Zimri-Lim, 463, 464, 465, 474.

Zobald, 286.

Zodlac, Signs of the, 739, 740.

Zohab, 111.

Zosimus, 33³, 36⁶, 40, 40¹.

ZU.EN, 697.

Zürich Vocabulary, 732.

INDEX OF AUTHORS

Abel, Ludwig, 332², 677¹, 767.
 Adams, R. M., 378, 400¹, 401.
 Alnsworth, William F., 54, 270.
 Alsleitner, J., 259.
 Albemarle, George Thomas Keppel,
 Lord, 53, 90.
 Albright, William Foxwell, 314, 465,
 466, 469-470, 471, 472-473, 474,
 475, 478, 479, 481, 482, 499¹, 758, 763.
 Alexander, Constance M., 66², 260¹.
 Allen, F. O., 376.
 Alliot, M., 484².
 Allotte de la Fuÿe (or: Fnye),
 Maurice François, 761.
 Altman, Charles B., 342, 471⁵, 472¹.
 Amiaud, Arthur, 194, 361.
 Andrae, Walter, 14, 302, 305, 306,
 307-308, 320, 321, 331, 348, 349,
 350, 352, 353, 363, 364, 366, 367,
 368, 577, 704, 704², 764.
 Anquetii-Duperron, Abraham Hya-
 cinthe, 96, 96¹, 97, 99, 100, 101.
 d'Anville, Jean Bourguignon, 43, 44⁸,
 45, 48.
 Arkell, W. J., 755.
 Arne, T. J., 757.
 Arnold, J. R., 395².
 Ashton, Francis, 61, 61², 62.
 Autran, C., 232.

 Babbage, Charles, 325.
 Bache, Charles, 344, 345, 370, 371.
 Bachmann, Walter, 348, 368, 382.
 Badger, G. P., 294, 294¹.
 Bailly-Fraser, see Fraser.
 Balbl, Gasparo, 44.
 Ball, C. J., 194, 232.
 Ballyet, Emmanuel, 44 45¹.
 Banks, Edgar James, 302, 367.

Banks, Sir Joseph, 52, 76.
 Barbaro, Giosafat, 55, 55⁴, 56¹.
 Barnett, R. D., 755.
 Barth, J., 217.
 Barthélemy, Jean Jacques, 49, 49^{2,4},
 50¹, 63, 64, 73, 94, 132.
 Barton, Geo. A., 192-194, 195, 197,
 198, 498¹, 500¹, 761, 767.
 Bartus, Th., 368.
 Bate, Dorothea Minola Alice, 372, 758.
 Bauer, Theo, 768.
 Baumgartel, Elise J., 756.
 Baumgarten, F., 352, 366.
 Baumgarten, Siegmund Jacob, 72.
 Baumgartner, W., 23⁸.
 Bayer, Franz, 197.
 Benuchamp, Joseph de, 45, 48-50,
 63, 65, 66, 75, 78, 94, 132, 134, 185,
 267, 282, 285, 298.
 Beazeley, Alexander, 319¹.
 Bedri Bey, 364, 368.
 Beer, E. F. F., 63, 114.
 Behrens, E., 762.
 Bell, Gertrude, 277-278, 281, 370.
 Bell, T. S., 287, 345, 382.
 Bellho, Carl (Charles), 47, 47⁴, 51, 51¹,
 52, 69, 70, 73, 79, 80-81, 81¹, 82,
 83, 84, 85, 87, 87¹, 90, 103, 110, 111,
 135-136, 137, 139, 160, 189, 275, 302.
 Bembo, Ambrogio, 90, 90².
 Bentley, Theodor, 122.
 Bergmann, E., 332², 517¹.
 Benjamin of Tudela, 41, 41^{1,2}, 42, 44,
 750.
 Bergsträsser, G., 223², 224¹, 225.
 Berkooz, Moshé, 218¹.
 Berlin, George, 250, 733.
 Bezold, Carl, 68¹, 92, 158, 166², 167,
 172, 173, 174, 182, 184, 208⁴, 276¹,

- 332², 731, 750, 764, 768, 769.
 Blrch, Samuel, 93, 294, 309.
 Blttel, K., 754.
 Blegen, Carl W., 754.
 Bliss, F. J., 323.
 Bloch, S. J., 218¹.
 Böhl (Boehl), Franz M. Th. de Llagre, 218¹, 474, 478, 686.
 Bohtz, C. H., 350.
 Bolssler, Alfred, 762.
 Bonavla, E., 765.
 Booth, Arthur John, 63², 65¹, 74², 85¹, 119¹, 751.
 Borchardt, L., 467.
 Bordes, Fr., 387.
 Bork, Fr., 131, 232.
 Botta, Paul Émile, 64, 65, 70, 85, 86, 92, 93, 133, 134, 137, 140, 141, 144-145, 146, 148, 150, 152, 153, 168, 267, 268, 269, 270, 271, 272, 273, 275, 279, 288, 289, 290, 291, 293, 294, 300, 301, 302, 303, 304, 305, 309, 330, 335, 341, 342, 626.
 Bottéro, Jean, 764.
 Boucher de Crèvecœur de Perthes, Jacques, 385.
 Boudou, The R. P., 751.
 Boutcher, W., 296, 302, 343, 346, 349, 358.
 Bowler, R. E., 78, 80, 160, 167.
 Braidwood, Linda S., 328², 340, 377, 378, 381, 400¹, 405², 753, 759.
 Braidwood, Robert J., 316, 317, 327, 328, 340, 377, 378, 379, 380, 381, 391, 392, 394, 398, 399¹, 400¹, 401, 401¹, 405, 405², 411, 416, 417, 420, 434, 436, 437, 438², 445, 753, 754, 757, 759.
 Braune, W., 212⁴.
 Breasted, James Henry, 300¹, 446, 460, 472¹.
 Breull, H., 385.
 Brockhaus, Hermann, 177⁴.
 Broman, Vivian, 381.
 Brown, T. Burton, 419¹, 423², 425², 475, 757.
 Browne, Mr., 76.
 Brünnow, Rudolph Ernst, 169, 171, 182, 182⁴, 184, 258.
 Brugsch, Heinrich Karl, 171.
 Bruin, Cornelis de (Le Bruyn, Le Brun, Lebrun), 50¹, 56¹, 63, 65, 71, 72, 73, 88, 97, 101, 105, 113, 118.
 Brulns, E. M., 766.
 Brummer, V., 250¹.
 Buckingham, James Silk, 46, 81, 90.
 Budge, Sir Ernest A. Wallis, 63², 69, 78, 112², 119¹, 122¹, 130³, 152², 167, 273, 277, 284, 284³, 298, 305, 309, 312¹, 332², 347, 353¹, 363, 750, 751, 767.
 Buren, see Van Buren.
 Burnouf, Eugène, 62³, 64, 71, 79, 83, 84, 84¹, 89, 96, 105-106, 109², 112, 113, 115, 116, 123, 140.
 Burrows, E., 356, 357, 358.
 Burton-Brown, see Brown.
 Buxton, L. H. Dudley, 457.
 Callllé, René, 437.
 Caldwell, J., 354.
 Cameron, George G., 380, 381.
 Capart, J., 466¹.
 Carcopino, J., 319¹.
 Carnot, A., 325.
 Cartwright, John, 42, 44, 46, 267.
 Caton-Thompson, G., 755, 756.
 Cavagnac, E., 475.
 Caylus, Anne Claude Philippe Comte de, 50¹, 58, 66, 72, 73, 92, 188.
 Chadwick, H. M., 455.
 Champollion, Jean François, le jeune, 104, 122.
 Chardln, Jean (later: John), 49, 49³, 61, 62, 63, 71, 72, 87, 132.
 Chesney, Francis Rawdon, 3, 5, 5¹, 16, 54, 303.
 Chlera, Edward, 172, 173, 218¹, 300, 318, 320¹, 342, 370, 751, 761.
 Childe, V. Gordon, 401¹, 425², 456, 457, 484², 753.
 Chossat, Ed. de, 169, 171, 180.
 Christlan, Victor, 195³, 232², 432, 752, 753.
 Clay, Albert Tobias, 218¹, 528⁵, 731.
 Clinton, de Witt, 325.
 Commont, V., 385.
 Contenau, G., 208², 332¹, 475, 484¹, 752, 757, 761, 763, 764, 765, 769.

- Conti, Nicolo di (Niccolo de'), 44, 44¹.
 Cooke, R. S., 281.
 Cookson, M. B., 319¹.
 Coon, Carleton S., 354, 372, 418³, 458, 757.
 Cooper, F., 295, 302, 345, 382.
 Cordier, Henri, 122.
 Cornellus, Fr., 473, 474, 475, 478.
 Coste, Pascal, 71², 87, 88, 89.
 Court de Gébelin, Ant., 58, 188.
 Couvreur, W., 212⁵.
 Crawford, O. G. S., 319¹.
 Crawford, Vaugh, 354.
 Cros, Gaston, 361.
 Cuny, A., 212⁵.
 Darby, Hamilton D., 342, 374.
 Dauller-Deslandes, André, 58, 60, 64.
 Debono, F., 756.
 Deimel, Anton(lus), 168, 169, 170, 172, 174, 175, 182⁷, 184, 194, 195, 196, 198, 199², 234, 234¹, 235², 237, 239^{1,2}, 240, 245², 246¹, 247, 248, 251, 252, 253, 255, 257, 258, 258², 259, 260, 261, 262, 265, 332³, 450, 481, 517¹, 680², 733, 750, 762.
 Delaporte, Louis, 760.
 Delattre, A. J., 10, 125.
 Delitzsch, Friedrich, 74², 146, 147, 166¹, 171, 172, 173, 174, 177, 182, 183, 184, 191-192, 193, 207, 208⁵, 209¹, 215, 222, 224⁵, 236, 240, 240⁷, 241, 251, 253, 254, 258, 259, 264, 307, 332¹, 581, 727, 730, 732, 735, 751, 765.
 Delougaz, Pinhas, 312², 321, 321¹, 342, 369, 370, 373, 374, 375, 376, 424, 424^{1,2}, 438.
 Denon, Vlvant, 75, 76, 92.
 Dhorine, Paul Édouard, 762, 763, 764.
 Dieulafoy, A. M., 756.
 Dikaïos, Porphyrios, 409¹, 755.
 Dindorf, Wilhelm, 147⁵.
 Don Garcia, see Flgveroa.
 Dorow, Wilhelm, 68, 76, 79, 82, 103, 103², 133³, 134¹, 140.
 Dossin, G., 463, 464, 465¹, 548¹, 734, 769.
 Dougherty, Raymond P., 314.
 Drenckhahn, Fr., 766.
 Drexel, 232.
 Driver, G. R., 169, 199^{2,3}, 531¹, 768.
 Drouin, E., 32².
 Drouin, Raoul, 356.
 Dubberstein, W. H., 303.
 Dunand, Maurice, 755, 759.
 Ebeling, Erich, 218¹, 591², 750, 762, 763, 764, 765, 767, 769, 770.
 Edgerlon, W. F., 467, 467⁵.
 Ehrlich, R. W., 370.
 Ellers, W., 350, 768.
 Elsser, G., 768.
 Eldred, John, 44, 44³.
 Emmanuel de Saint Albert (Emmanuel Ballyet), 44, 44⁸, 45, 48.
 Epplug, J., 765.
 Erman, Adolf, 173.
 Evetts, Basil T. A., 63², 67¹.
 Ewald, H. G. A. von, 161.
 Ewing, J. Franklin, 757.
 Fulcon, N. L., 418¹.
 Falkenstein, Adam, 195, 238, 240, 247, 247^{4,6}, 248, 250¹, 252, 258, 260, 261, 261^{5,6}, 262, 264, 350, 429, 429², 726, 763, 765, 770.
 Faraj Basmachi, 372, 377, 378.
 Ferm, Vergillus Ture Anselm, 763.
 Field, Henry, 356, 371, 379.
 Field, P. H., 353.
 Flgulla, H. H., 332⁴, 358, 734, 770.
 Flgveroa, Don Garcia Silva, 56, 56¹, 57, 59, 60, 94, 95.
 Fine, Hillel A., 760.
 Flineschl, Vincenzo, 413.
 Flsher, Cl. S., 344, 354.
 Fisher, Thomas, 67, 76, 76¹, 77, 78, 80, 139, 143.
 Flandin, Eugène Napoléon, 71², 87, 88, 89, 90, 272, 293, 342.
 Flemmlng, Johannes, 81^{1,4}.
 Flower, Samuel, 56¹, 61, 61², 62, 62³, 63, 64, 70.
 Förtsch, W., 495^{1,4}, 761.
 Forrer, E. O., 483².
 Forsdyke, E. J., 425².

- Fossey, Charles, 63², 169, 174, 186¹,
 197, 749, 751.
 Fotheringham, J. K., 465, 468, 469,
 473, 482.
 Fox, A. H. Lane, see Pitt-Rivers.
 Franck, Carl, 131.
 Franeo, Fausto, 341, 374.
 Frank, C., 762.
 Frankena, R., 764.
 Frankfort, Henrl, 324, 336, 340, 342,
 373, 374, 375, 376, 397, 420, 425¹,
 429¹, 433, 436, 442, 453, 454, 471⁵,
 484, 763, 764.
 Fraser, James Balllie, 54, 268.
 Frederiek, Edward, 46.
 Fresnel, Fulgence, 46, 290, 302, 351,
 352, 356.
 Friedrlch, Johannes, 74², 484², 576¹.
 Fuad Safar, 359, 360, 376, 377, 379,
 404¹, 405¹, 406, 414¹, 415, 420¹,
 427².
 Fuhlrott, T., 385.
 Furlanl, Gluseppe, 174, 341, 374, 762,
 769.
 Gadd, Cyril J., 167, 184, 186¹, 235¹,
 240, 247⁷, 251, 252, 257, 257², 258,
 343, 344, 345, 346, 357, 358, 752,
 760, 763, 769.
 Gardane, P. A. L. de, 90.
 Gardner, E. W., 755.
 Garrod, Dorothy A. E., 337, 372, 386,
 390, 394, 753, 758.
 Garstang, J., 399², 404², 754, 758, 759.
 Gates, D. M., 395².
 Gautler, J. E., 756.
 Geer, Gerard de, 325.
 Geere, H. V., 354.
 Geers, Frederick W., 173, 211.
 Gelb, Ignace Jay, 172-173, 206¹,
 218¹, 451, 472¹, 475, 760.
 Geller, Samuel, 770.
 Gemell-Careri, G. F., 58⁸, 60, 64.
 Genouillac, Henrl de, 282, 324, 356,
 361, 373, 732, 761.
 Gesenius, Gullielmus (Willhelm), 84.
 Ghanima, H. E. Yuslf, 281.
 Ghlrshman, Roman, 324, 361, 373,
 415³, 458⁴, 757.
 Glanville, S. R. K., 436².
 Gobineau, J. A. de, 161, 163.
 Gössmann, F., 169¹.
 Goetze (Götze), Albrecht, 172, 174,
 208, 210, 221¹, 222¹⁻³, 258², 451,
 466, 475, 478-479, 481, 528⁶, 760,
 766, 768.
 Goldman, Hetty, 754.
 Golénscheff, W., 332¹, 581, 588².
 Goossens, Godefroy, 218¹, 475.
 Gordon, Cyrus H., 218¹, 225⁴, 371, 750.
 Gouuea, Antonio de, 56, 56¹, 60.
 Grélot, G. J., 62.
 Gressmann, Hugo, 768, 769.
 Grivaud de la Vincelle, Cl. M., 66.
 Grotefend, Georg Friederich, 47⁴, 63,
 66, 67, 68, 69, 70, 73, 74, 74², 75,
 77¹, 79, 80, 81, 81¹, 82, 83, 84, 85,
 87, 87¹, 92, 99-103, 104, 105, 106,
 107, 109, 110, 111, 112, 112², 113,
 114, 126, 133, 134, 134²⁻⁴, 135, 136,
 136⁴, 137, 139-140, 141, 142, 143,
 147, 189, 275.
 Gulllois (French consul at Mosul),
 290, 291.
 Guyard, Stanislas, 171.
 Guyer, Samuel, 368.
 Haas, G., 758.
 Hagen, Friedrich Helurich von der,
 104⁵.
 Hager, Joseph (Gluseppe), 67, 75-76,
 76¹, 77, 79, 132, 137, 138, 185.
 Haines, R. C., 354.
 Hakluyt, Rlehard, 42⁷, 44³, 60¹.
 Halévy, Joseph, 125, 180-181, 182,
 183, 191, 448.
 Hall, H. R., 14, 278, 280, 357, 360,
 369.
 Haller, Arndt von, 349, 350.
 Hallock, Richard T., 173, 730, 731.
 Hamdi Bey, 276, 277, 278, 364.
 Hamilton, R. W., 344, 347.
 Hammer(-Purgstall), Joseph von 51³,
 68, 80, 81⁴.
 Hammerich, Louis Leonor, 212⁵.
 Handcock, P. S. P., 167.
 Harden, D. B., 374.
 Harding, S., 88.

- Hargreaves, H., 754.
 Harper, Robert Francis, 332³, 353, 367, 517¹, 544, 604¹, 607¹, 734¹, 761, 768.
 Hartman, Louis F., 732.
 Haupt, Paul, 171, 174, 181, 182, 211, 708¹, 733.
 Haynes, J. H., 14, 302, 304, 305, 313, 353, 354.
 Hedin, Sven, 750.
 Heeren, Arnold Hermann Ludwig, 74², 101², 1021², 110, 112.
 Heidel, Alexander, 768, 769.
 Heinrich, Ernst, 321, 350, 366, 414, 414², 433, 764.
 Helbæk, Hans, 381.
 Hendriksen, Hans, 212³.
 Herbert, Thomas, 44, 57, 59, 60-61, 64, 94, 95, 283.
 Herzfeld, Ernst, 333, 348, 368, 451, 451³, 757.
 Heuzey, Léon, 181, 361.
 Hill, H. D., 375.
 Hilpprecht, H. V., 16, 16¹, 47⁴, 83¹, 191, 197, 240², 287², 304, 305, 306, 306¹, 307, 353, 354, 365, 366, 702³, 742², 752.
 Hiltzheimer, Max, 765.
 Hlncks, Edward, 78, 78², 107, 115, 119², 120-122, 124, 127-128, 134, 134⁴, 139, 141-143, 144, 145, 147, 148, 149-152, 153, 154, 155, 157-158, 159, 160, 161, 162, 163, 164, 168, 173, 175, 177, 177⁴, 177-178, 180, 189, 304.
 Hltzig, Ferdinand, 122.
 Hodder, Ch. D., 302, 343, 345.
 Hoeck, C. Fr. Chr., 97.
 Hogarth, D. G., 755.
 Holler, Mr., 57.
 Holma, Harri, 218¹, 732.
 Holtzmann, Adolf, 62³, 115.
 Hommel, Fritz, 183, 191, 232, 751.
 Hooke, S. H., 764.
 Houghton, W., 190-191.
 Howardy, Gert, 169-170.
 Howe, Bruce, 378, 379, 380, 381, 394.
 Hrouda, B., 350.
 Hrozny, Bedřich (Friedrich), 208², 332¹, 451, 475, 486, 507, 575, 581, 582, 686, 760.
 Huber, E., 218¹.
 Hüsing, G., 124, 131.
 Hutchinson, R. W., 282¹, 347, 751.
 Huxley, Thomas Henry, 329.
 Hyatt, James Phillp, 218¹.
 Hyde, Thomas, 59, 62³, 63, 63², 64, 70, 96.
 Ingholt, Harald, 756.
 Ives, E., 43.
 Jacobsen, Thorkild, 12, 173, 182⁷, 342, 354, 373, 374, 375, 397, 429¹, 454, 471⁵, 476, 512, 658¹, 659⁴, 760, 762, 763.
 Jacquet, Eugène, 106, 107, 113, 114.
 Jaegher, J. de, 361.
 Jankowski, Mr., 167.
 Jastrow, jr., Morris, 762.
 Jean, Charles-F., 358, 751, 762, 763, 764, 768.
 Jensen, Hans, 126.
 Jensen, Peter, 762, 767, 769, 770.
 Jestlin, R., 187, 248, 260, 261, 264.
 Johns, Claude Hermann Walter, 476⁶, 603¹, 761.
 Jones, Sir Henry Stuart, 172, 185.
 Jones, James (see above p. 47³; John see *Dict. of Nat. Biogr.*) Felix, 41, 47, 47³, 117, 267, 297, 301.
 Jordan, Julius, 281, 320, 348, 349, 350, 352, 363, 364, 453, 457.
 Kaempfer, Engelbert, 58, 63, 63², 71-72, 88, 188.
 Kanpman, A. A., 72¹.
 Keith, Sir Arthur, 458, 459.
 Kenyon, Kathleen M., 758.
 Keppel, see Albemarle.
 King, Leonard W., 69, 70, 92, 123, 158, 166², 167, 174, 277, 347, 382, 468, 476⁵, 477, 500², 501¹, 502⁴, 750, 760, 767, 768, 769, 770.
 Kinneir, J. Macdonald, 46, 83, 90, 132-133, 267.
 Kircher, Athanasius, 48, 65.
 Klaproth, Heinrich Julius, 103⁴, 112.
 Kleuker, J. Fr., 961², 101.

- Kluge, Th., 232.
 Knudtzon, J. A., 332², 616¹, 617¹, 769.
 Könlg, F. W., 131.
 Kohler, J., 768.
 Koldewey, Robert, 14, 24¹, 24³, 31⁴,
 39, 278, 302, 305, 306-308, 314, 320,
 330, 331, 348, 352, 353, 365, 366,
 439, 642, 649, 701, 701².
 Koschaker, P., 768.
 Kramer, Samuel Noah, 263, 344, 355,
 366, 420, 424¹, 455, 457, 483⁴, 528⁴,
 724³, 763, 765, 768.
 Kraus, F. R., 512³.
 Kraus, P., 769.
 Krückmann, O., 350.
 Kùchler, F., 706², 765.
 Kugler, Franz Xaver, 29⁶, 33⁴, 467,
 468, 470, 482, 766.
 Kuhn, Ernst, 749.
 Kunstmann, W. G., 763.
 Kurylowicz, J., 212⁵.

 Labat, René, 170, 196¹, 200¹, 211²,
 218¹, 234, 680¹, 726¹, 763, 765, 769.
 Lacheman, Ernest R., 167², 732.
 Lacouperle, see Terrien de Lacou-
 perle.
 Læssøe, Jørgen, 531¹.
 Lamb, Winlfred, 754.
 Lambert, Maurice, 760.
 Lamon, Robert Scott, 758.
 Lampre, G., 756.
 Landsberger, Benno, 172, 172-173,
 173, 174, 184-185, 207, 207⁴, 209,
 210, 221², 222, 224, 225, 229, 236,
 454, 481-482, 529, 529², 675¹, 726,
 730, 731, 732, 733, 759, 762, 765.
 Landseer, John, 80.
 Lane, W. H., 356.
 Langdon, Stephen H., 175, 184, 232,
 233¹, 236, 253, 254, 258, 262, 298,
 318, 356, 369, 371, 374, 429, 469,
 498, 672¹, 732, 733, 760, 762, 768,
 769.
 Langsdorff, Alexander, 757.
 Lassen, Christian, 88, 104, 106-107,
 113, 114, 115, 116, 116², 117⁴, 118,
 119, 120, 121, 127, 140.
 Laurent, J. C. M., 41³.
 Layard, Austen Henry, 47⁴, 55, 65,
 69, 70, 81, 92, 93, 93¹, 118⁴, 125,
 134, 150, 155, 163, 166, 214, 267,
 268-269, 270, 271, 272-273, 274,
 275, 276, 279, 282, 285, 286, 287,
 288, 289, 289², 290, 291, 292, 293-
 295, 296, 296¹, 300-301, 302, 303,
 304, 305, 308, 309, 310-311, 320,
 330, 335, 341, 342-343, 344, 345,
 346, 348, 350, 351, 352, 353, 353¹,
 355, 382, 632, 703, 720.
 Leakey, L. S. B., 388.
 Leander, Pontus, 208⁴.
 Le Brun, Lebrun, see Bruin.
 Le Bruyn, see Bruin.
 Ledrain, E., 183.
 Lees, G. M., 418¹.
 Legrain, Léon, 357, 358, 764.
 Lehmann(-Haupt), C. F., 31², 183,
 183¹, 184, 233¹, 382.
 Leltner, K., 366.
 Lenormant, François de, 166, 167,
 177, 179-180, 181, 182, 232, 236,
 258.
 Lenzen, Heinz J., 350, 427¹, 429, 764.
 Leslie, Charles, 378, 405, 408.
 Levey, Martin, 765.
 Levi, Doro, 341, 374.
 Levy, Selim J., 751.
 Lewy, Julius, 208, 208², 218¹, 332¹,
 768.
 Libby, Willard F., 325, 395².
 Lichtenstein, Anton. August. Henric.,
 75, 76, 95, 103, 137-138, 141, 148.
 Liddell, Henry George, 172, 185.
 Lie, A. G., 768.
 Lindl, E., 307.
 Lloyd, Seton, 280, 281, 321¹, 338,
 342, 351, 360, 369, 373, 374, 375,
 376, 377, 404¹, 405, 405¹, 406, 420¹,
 424¹, 686, 752, 754.
 Lockard, D. W., 366.
 Löwenstern, Isidore, 86, 124, 125,
 128, 129, 140-141, 143-144, 145,
 146, 147, 148, 150, 189.
 Loftus, William Kennett, 3, 16, 284,
 285, 296, 298, 302, 303, 304, 341,
 343, 346, 349, 349¹, 358.
 Longman, Thomas Norton, 110.

- Longpérier, Henri Adrien Prévost de, 86, 92, 145, 146, 149.
 Lottin de Laval, Victorien Pierre, 66, 69, 69³, 86.
 Lotz, W., 767.
 Loud, Gordon, 342, 373, 471⁵, 472¹, 758.
 Luckenbill, Daniel David, 172, 594, 731, 768.
 Lutz, H. Fr., 370, 528⁵.
 Luzzatto, Ph., 161².
 Lycklama à Nijeholt, T. M. Chevalier de, 351.
 Lynch, T. Kerr, 349, 358.
 Lyon, David Gordon, 174, 627³, 768.

 Macallister, R. A. S., 323.
 McCown, Donald E., 354, 355, 405, 418, 418², 420², 445, 757.
 McEwan, C. W., 374, 375.
 Mackay, Ernest, 356, 371, 453, 459, 756.
 Mackintosh, James, 51².
 Macmillan, K. D., 672¹.
 MacRae, Allan Alexander, 218¹.
 Mahmud El Amlin, 378, 380.
 Mai, Angelo, 188.
 Malan, Solomon Caesar, 345.
 Mallowan, M. E. L., 280, 311, 337, 344, 347, 348, 357, 375, 378, 405⁴, 408, 409, 409², 410, 425^{3,5}, 470, 475, 480, 481, 502³, 662¹, 723, 753, 754, 755.
 Mandelslo, Joh. Albr. von, 57, 58.
 Mandeville, John, 41, 41⁵.
 Manuzio, Antonio, 55⁴.
 Marshall, J., 756.
 Martin, François, 769, 770.
 Martin, Richard A., 371.
 Martin, W. J., 358.
 Matson, F. R., 381.
 Matouš, Lubor, 732.
 Maynard, J. H., 173.
 Méchineau, Lucien, 194.
 Mecquenein, Roland de, 131, 756, 757.
 Meek, Theophile James, 370, 732.
 Meer, see Van der Meer.
 Meier, G., 770.
 Meissner, Bruno, 7, 169, 172, 174, 307, 493, 494, 530, 607¹, 641², 679¹, 683, 707¹, 731, 733, 750, 760, 764, 767.
 Ménant (or Menant), Joachim, 62³, 64, 69, 69³, 70, 71, 83, 84, 85, 123, 133, 146, 163, 166, 167, 168, 173, 174, 191, 218¹.
 Mercer, Samuel Alfred Browne, 174, 197, 769.
 Mesnil du Buisson, R. du, 754.
 Messerschmidt, L., 175, 588¹, 614¹, 659¹.
 Meyer, Eduard, 175, 210¹, 382, 435, 448, 453, 467, 585, 760.
 Meyer, Joseph A., 354.
 Meyer, Ludwig, 365.
 Meyer, Wilhelm, 74², 100¹.
 Michaud, Louis Gabriel, 45¹.
 Michaux, A., 64, 66, 77.
 Mignan, Robert, 46, 53, 54, 268, 298.
 Milles, John C., 531¹, 768.
 Millin, Aubin Louis, 77, 78, 79, 102⁴, 104, 138².
 Mitford, Edward Ledwich, 55, 269, 270, 293, 295.
 Moberg, Axel, 703.
 Möller, Herman, 212.
 Mohl, Jules, 85, 86, 113, 137, 140, 268, 293, 303, 342, 382.
 Moortgat, A., 455, 457, 763, 764.
 Mordtmann, A. D., 125.
 Morelli, Jacopo, 90².
 Morgan, Barbara E., 468².
 Morgan, Jacques de, 131², 332³, 396, 515, 531, 756.
 Morgenstern, Julian, 762.
 Morier, James Justinian, 78-79, 83, 86, 88, 101².
 Moritz, B., 365.
 Mortillet, L. L. G., 385.
 Movius, H. L., 387, 395².
 Müller, August, 749.
 Müller, Friedrich Max, 116, 122.
 Müller, Iwan von, 751.
 Müller, K. F., 763.
 Münster, Frederik (Friederich) Christian Carl Hinrich, 68, 75, 94, 95, 98-99, 100, 101, 101¹, 102, 104, 105, 110, 123, 126, 127, 132, 138, 151.

- Muhammed Ali Mustafa, 351, 360, 363, 377.
 Murr, Christoph Gottlieb von, 58, 73, 74, 74¹, 188.
 Murray, John, 110, 295.
 Muss-Arnolt, W., 171-172, 173, 174, 184.
 Myres, John L., 283³, 456, 754.
 Naji al Asll, H. E., 281, 338, 360, 379.
 Nasse, The R. P., 382.
 Nassouhi, Essad, 471.
 Naster, P., 174.
 Naumann, R., 754.
 Neugebauer, O., 471, 473, 476¹, 766.
 Neuville, René, 399², 758.
 Newell, E. T., 34³.
 Newton, F. G., 357.
 Niebuhr, Carsten, 43, 45, 46, 49, 56¹, 64, 70, 72-73, 74, 74¹, 74², 85, 86, 88, 94, 95, 95¹, 96, 97, 99, 100, 101, 104, 105, 106, 107, 113, 114, 115, 116, 118, 120, 126, 127, 129, 132, 138, 140, 185, 267.
 Nies, J. B., 761.
 Nöldeke, Arnold, 321, 350, 352, 366.
 Norris, Edwin, 78, 89, 91, 93, 112, 113, 117, 118, 121, 121⁴, 124, 129-130, 130¹, 131, 152, 153, 156, 160, 166, 167, 168, 170-171, 174.
 Nougayrol, J., 531¹.
 Nyerup, Erasmus (Rasmus), 82.
 Oakley, K. P., 325.
 Oberhuber, K., 248⁸.
 O'Callaghan, R. T., 475.
 Ogden, Ellen S., 192, 193.
 Olearius, Adam, 57².
 Olivier, Guillaume Antolne, 3, 43, 50, 78, 90, 282.
 Olmstead, A. T., 606, 760.
 Olshausen, Justus, 147.
 Oppenheim, A. Leo, 173, 222³, 732, 763.
 Oppenheim, Max von, 451, 627, 627², 756.
 Oppert, Jules (Julius), 21⁵, 23⁴, 46⁵, 69, 78, 78², 121-123, 124, 125, 130, 131, 134⁴, 135, 158, 160, 161, 162-166, 167, 173, 174, 177, 178-179, 179, 180, 181, 183, 190, 193, 195, 198, 332, 351, 352, 353, 356.
 Ortelius, Abraham, 42, 44.
 Osten, H. H. von der, 754.
 Otten, Charlotte M., 377.
 Otter, Jean, 43, 45, 90, 90³.
 Otto, Walter, 29⁵, 751.
 Ouseley, William, 67, 71, 76, 79, 82, 84, 88, 99, 99⁴, 101².
 Paffrath, Th., 762.
 Pallls, Svend Aage, 20^{3.5}, 22⁶, 24², 27⁵, 75¹, 212⁶, 238³, 324, 435², 436, 437, 451⁴, 464⁵, 465, 465^{3.5}, 467⁷, 468³, 470³, 471⁵, 477^{4.5}, 691¹, 692¹, 759, 762.
 Park, Mungo, 437.
 Parker, Barbara, 344.
 Parker, R. A., 30³.
 Parrot, André, 41⁶, 53⁴, 66¹, 280, 328, 335, 358, 361, 362, 418, 420, 445, 454⁴, 455-456, 457, 459, 463, 464, 465, 466, 475, 509, 752, 753, 758, 759, 764, 769.
 Pauli, H., 212¹.
 Pedersen, Holger, 212⁵, 575.
 Pelser, Felix E., 20⁴, 525¹, 530, 626², 767, 768.
 Penniman, T. K., 356.
 Pennini, Ricoldo, 41.
 Perdrizet, Paul, 314.
 Perkins, Ann Loulse, 405, 405², 411, 415, 418, 424¹, 427¹, 445, 753.
 Perrot, Jean, 758.
 Persons, V. S., 367.
 Perthes, see Boucher de . . . Perthes.
 Peters, John Punnett, 287, 304, 305, 306¹, 353, 354.
 Pethahiah of Ratisbon, 41², 41⁵.
 Petrie, Sir W. M. Flinders, 309, 319, 320, 326, 328, 444, 756.
 Peyrony, Denis, 385.
 Pézard, Maurice, 757.
 Pfeiffer, Robert H., 370.
 Piepkorn, A. C., 371, 768.
 Pietro della Valle, see Valle.
 Piggott, Stuart, 756.
 Pillet, M., 351, 752.

- Plinches, Th. G., 22¹, 30⁴, 341.^{2.5.6.8}, 36³, 167, 174, 325, 332¹, 467, 476⁵, 529, 581, 628¹, 689⁴, 732, 734.
 Plquet-Pellorce, Capitaine, 314.
 Pitt-Rivers, Augustus Henry Lane Fox, 327-330.
 Place, Victor, 290, 291, 292, 293, 302, 304, 305, 309, 320, 330, 342, 348, 382, 703.
 Plat Taylor, J. du, 759.
 Poebel, Arno, 167, 172, 174, 178, 184, 209⁴, 236, 237, 241¹, 247, 248, 249, 251, 252, 253, 254-257, 258, 259, 260, 261, 261⁵, 262, 262⁴, 263, 264, 265, 471, 472, 473, 474, 480, 481, 731, 732, 733, 734, 760, 761.
 Poggio Bracciolini, Francesco, 44¹.
 Pognon, Henri, 182.
 Pohl, Alfred, 750, 761.
 Poidebard, Antoine, 319¹.
 Polo, Marco, 41.
 Porter, Sir Robert Ker, 46, 51, 52, 67, 72, 79, 81, 82, 83, 88, 90, 90⁸, 113, 116², 118, 134, 134⁴, 142.
 Posener, G., 466¹.
 Post, Lennart von, 325.
 Potratz, H. A., 765.
 Pottier, Edmond, 397, 756.
 Preusser, Conrad, 348, 349, 350, 373, 374.
 Price, William, 88, 105.
 Prince, John Dyneley, 183, 250¹, 353.
 Princep, James, 114.
 Prinz, H., 348.
 Prisse d'Avennes, E., 149, 159.
 Pritchard, J. B., 528⁶, 769.
 Proosdij, B. A. van, 770.
 Pumpelly, Raphael, 754.
 Purchas, Samuel, 427, 60¹.
 Purves, Pierre Marot, 218¹.
 Ramuslo, G. B., 44¹.
 Ranke, H., 210¹, 218¹.
 Rask, Rasmus, 68, 104-105, 106, 113, 114, 124, 176.
 Raspe, Rud. Erich, 58, 74, 74³, 75, 188.
 Rassam, Christian, 54, 270, 287, 294, 345.
 Rassam, Hormuzd, 160, 220¹, 273, 274, 275, 276, 284, 285, 291-292, 294, 295, 296, 298, 302, 304, 305, 308, 309, 310, 311, 312, 320, 330, 341, 342-343, 344, 345, 346, 348, 352, 353, 355, 361, 362, 363, 364, 632, 723.
 Rassam, Nimrud, 344, 346, 348, 362.
 Rauwolff, Leonhard, 41, 42, 42¹, 44.
 Ravn, Otto Emil, 23, 639, 703, 769.
 Rawlinson, George, 110³, 122, 122², 639.
 Rawlinson, Sir Henry Creswicke, 63, 66, 69, 70, 78, 78², 84, 88, 89, 91, 93, 108-123, 124, 126, 128, 129, 130, 132, 134, 135, 136, 142, 143, 146, 147, 148, 149, 150, 152-159, 160, 161, 162, 163, 164-165, 166-167, 168, 175, 176-177, 177, 180, 181, 189, 190, 232, 265, 290, 291, 296, 301, 302, 303-304, 304, 327, 332, 343, 345, 346, 348, 353.
 Reed, Ch. A., 381.
 Reid, J. H., 314.
 Reimpell, Walter, 761.
 Reinach, S., 686.
 Reisner, G. A., 240¹, 436, 584³, 682¹, 733.
 Rémusat, Jean Pierre Abel, 268.
 Renan, Ernest, 161.
 Rennell, James, 52, 53.
 Reuther, Oskar, 352.
 Rice, D. T., 356.
 Rich, Claudius James, 45, 46, 47, 47^{2.4.5.6}, 50, 51-53, 54, 55, 66, 68, 69, 79, 80, 81, 81⁴, 82, 83, 84, 85, 86, 87, 88, 94, 103, 107, 118, 125, 133, 134, 136, 162, 189, 267, 268, 269, 269¹, 270, 275, 282, 283, 284, 285, 286, 298, 302, 303, 309, 641¹.
 Rich, Mary, 51¹, 115, 269¹.
 Rinaldo da Monte di Croce, Fra, 41.
 Rössler, Otto, 218¹.
 Rogers, Robert William, 62³, 74², 157¹, 752.
 Rose, J. Cruikshank, 357, 375.
 Ross, H. J. (British Merchant at Mosul), 272, 294, 345, 382.
 Ross, Dr. John, 54, 69, 270.
 Ross, Ludwig, 68.

- Rost, P., 607², 641², 767.
 Rouet (French Consul at Mosul), 289, 290, 382.
 Rowton, M. B., 475.
 de Rozière, 76.
 Rust, A., 759.
 Rutten, Maggie, 195, 475.
 Ryckmans, G., 174, 175.
 Ryland, J., 76, 78.
- Sachau, Ednard, 3, 307, 313, 750.
 de Sacy, see Silvestre de Sacy.
 Saint-Martin, Antoine Jean, 73, 79, 84, 92, 103, 103⁴, 103-104, 104, 105, 112, 112², 113, 123.
 Sandford, K. S., 755.
 San Nicolò, Marlan, 34¹¹, 761.
 Sarauw, Christian, 214, 214¹⁻⁴, 223¹.
 Sarzec, Ernest de, 53, 181, 282, 284, 286, 292, 302, 303, 332, 333, 339, 360, 361, 447, 667.
 Saṭl al Ḥaşri, 281.
 Sauley, L. Félicien J. Caignart de, 86, 124, 128, 129, 146, 147-149, 159, 161, 170.
 Saussure, Ferdinand de, 212.
 Sayce, Archibald Henry, 124, 125, 126, 173-174, 177, 178, 179, 180, 191, 292, 332¹.
 Schaeffer, Claude F. A., 274, 325, 417¹, 468¹, 475, 480, 755, 758, 760.
 Scharff, A., 436, 437.
 Schell, Jean-Vincent, 24¹, 483³, 77², 168, 174, 298, 332³, 364, 501², 502⁵, 528⁵, 574, 701², 731, 767, 768.
 Scherman, Lucian, 749.
 Schlumberger, D., 314.
 Schmidt, Erich (F.), 319¹, 329, 366, 754, 757.
 Schmidt, Hubert, 756.
 Schmidtke, F., 591¹.
 Schneider, Nikolans, 197, 581².
 Schollmeyer, A., 770.
 Scholtz, R., 256.
 Schorr, M., 768.
 Schott, A., 350, 769.
 Schrader, Eberhard, 147, 168, 177, 181, 586¹, 762, 767, 768.
 Schrank, W., 762.
- Schroeder, Eric, 356, 371.
 Schroeder, Otto, 332², 525¹, 578¹, 619¹, 620¹, 622¹, 629¹, 705¹.
 Schubert, K., 474, 478.
 Schütz, see Schulz, Fr. Éd.
 Schulz, Fr. Éd., 623, 64, 71, 83, 84, 85, 89, 92, 105, 133, 141, 147, 147⁶, 286.
 Schuster, H. S., 730, 731, 765.
 Schwenzner, Walter, 761.
 Scott, Robert, 172, 185.
 Semler, J. S., 72.
 Sestini, Domenico, 43.
 Sethe, Knrt, 466⁶, 467.
 Seton Williams, M. V., 759.
 Sevelinges, H. de, 292, 360.
 Sewell, J. W. S., 436, 438, 469, 469¹.
 Seyffarth, Gustav, 138.
 Seyrig, Henri, 314.
 Sherley, Anthony, 42, 42³, 44.
 Shipton, Geoffrey M., 758.
 Sidersky, D., 303, 465, 466, 471, 474, 475, 476, 477, 478, 479.
 Silvestre de Sacy, Antoine Isaac Baron, 47², 62, 74², 96, 99, 100, 102, 103, 104, 110, 113, 138, 268.
 Smith, George, 24, 78, 167, 186, 273, 274, 275, 276, 284, 292, 298, 302, 304, 316, 343, 346, 570, 701, 701².
 Smith, James G., 378.
 Smith, Lionel, 281.
 Smith, Sidney, 25³, 27⁵, 29⁵, 30⁵, 167, 208², 281, 332¹, 357, 465², 466-470, 471, 473, 474, 475, 476, 476⁵, 477, 478, 479, 480-481, 482, 483, 580, 584, 601¹, 645¹, 686, 759, 760.
 Soden, Wolfram von, 170, 172, 174, 207-208, 208¹, 210, 210³, 211²⁻³, 213, 214²⁻³, 215, 218¹, 221¹, 222, 222¹, 224, 224², 225¹, 229, 229³, 231, 245, 350, 475, 726, 726¹, 734, 765, 766, 770.
 Solecki, Ralph S., 131, 380, 381, 390, 391, 394, 395.
 Sollberger, Edmond, 232², 236, 238, 245, 246, 247, 248, 248⁷, 249, 250¹, 252, 253, 258, 260-265, 483³, 759.
 Spelser, Ephraim A., 344, 345, 370, 371, 372, 374, 450-451, 454, 454¹⁴, 769.

- Spiegel, Friedrich, 123.
 Starkey, J. L., 286.
 Starr, Richard F. S., 370.
 Steele, F. R., 354, 355, 468², 529.
 Stein, Sir Aurel, 755, 757.
 Stekelis, M., 758.
 Stephens, F. J., 218¹.
 Sterrett, J. R. S., 313.
 Steuart, Mr., 84.
 Stewart, see Steuart.
 Stock, Hanns, 436, 484².
 Stoffel, E. G. H. C., 319, 327.
 Strassmaler, J. N., 21⁵, 30⁵, 36³, 167, 171.
 Streck, M., 233¹, 632¹, 724, 768.
 Stueken, E., 232.
 Szellechter, E., 768.

 Taha Baqlr, 351, 363, 377, 766.
 Talbot, William Henry Fox, 78, 78², 81, 159-160, 161, 170.
 Tallqvist, Knut L., 218¹, 708³, 763, 770.
 Tandeau, F. B., 57.
 Tarn, W. W., 29⁵.
 Tavernier, Jean Baptiste, 42, 42⁶, 44, 58, 89, 90¹.
 Taylor, J. du Plat, see Plat Taylor.
 Taylor, Vice-consul J. E., 69, 296, 304, 341, 357, 359.
 Teilhard de Chardin, Pierre, 388.
 Teller, G., 324, 358, 361, 373.
 Terrien de Lacouperie, A. É. J. B., 36².
 Texier, Charles Félix Marie, 71², 88, 89.
 Thévenot, Melchisedech, 58.
 Thomas, Félix, 302, 305, 320, 342, 351, 352.
 Thompson, R. Campbell, 92, 123, 158, 166², 167, 277, 282¹, 315, 335-336, 336, 347, 348, 357, 359, 360, 402, 420, 677³, 752, 760, 765, 770.
 Thureau-Dangin, François, 170, 183, 187, 191, 194, 208², 209, 211², 248, 250, 251, 253, 255¹, 256, 258, 258², 260, 361, 382, 463, 464, 465, 466, 466¹, 471, 475, 475-478, 478, 479, 505¹, 701², 724², 731, 732, 742, 744, 759, 762, 766, 767, 770.
 Tobler, A. J., 371, 372, 417.
 Tonlettl, Joseph, 353.
 Tulane, Edna, 405².
 Turville-Petre, F., 758.
 Tushingham, A. Douglas, 758.
 Tychsen, Oluf Gerhard, 94, 95, 97, 98, 99, 100, 101, 102, 110, 126, 137, 138.
 Tychsen, Th. Chr., 74², 102.
 Tylor, Edward Burnett, 190.

 Unger, Eckhard, 10, 22³, 31², 34⁵, 76¹, 194, 306⁴, 352, 479, 702¹.
 Ungnad, Arthur, 214, 21⁵, 23³, 34¹¹, 174, 175, 207, 209, 210, 212¹, 213, 214³, 218¹, 222², 224, 224⁵, 228¹, 229, 332³, 450, 461^{2,3}, 468², 470-471, 473, 474, 475, 476, 476⁶, 477, 478, 479, 484¹, 514¹, 518¹, 519¹, 530³, 586¹, 731, 761, 768, 769, 770.
 Valle, Pietro della, 42, 42⁵, 44, 45, 48, 53, 56, 57, 58, 59, 60, 61, 64, 65, 94, 138, 267.
 Vallols, H., 458⁴.
 Van Buren, E. Douglas, 507¹, 763.
 Van der Meer, P., 474, 483², 730, 732, 751.
 Van der Waerden, B. L., 475.
 Vats, M. S., 756.
 Vaufrey, R., 385.
 Verner, Karl, 213.
 Vidal, M., 84.
 Vignard, E., 385.
 Vincent, L. H., 269¹.
 Vincenzo Maria di S. Caterina da Siena, 44, 44⁶.
 Virolleaud, Ch., 169, 709¹, 765.
 Vogel, Kurt, 743.
 Vold, Karl, 762.

 Wacchter, J., 758, 759.
 Waerden, see Van der Waerden.
 Wahl, Samuel Friedrich Günther, 74.
 Wallich, Nathanael, 68, 82, 83.
 Ward, H., 313.
 Ward, William Hayes, 764.
 Warren, S. H., 385.

- Watelin, Louis Charles, 280, 298, 356, 371, 374.
 Watelin, R., 356.
 Waterman, Leroy, 370, 372, 761, 769.
 Watson, Patty Jo, 381.
 Weber, Otto, 764.
 Weidner, Ernst F., 168, 332³, 465, 470, 471⁵, 472, 474, 475, 482, 499¹, 724¹, 734, 749-750, 750, 766, 767, 770.
 Weir, Cecil J. Mullo, 172.
 Weissbach, F. H., 211¹, 214, 222, 231, 742, 881, 92, 123, 124, 126, 128, 131, 147, 183⁵, 198, 307, 352, 626¹, 633¹, 698¹, 730.
 Weltmeyer, Mogens, 765.
 Westergaard, Niels Ludvig, 71, 79, 86, 88, 107, 107², 118, 123, 124, 126-127, 128, 129, 130-131, 136-137, 142, 151, 189.
 Wetzel, Fr., 392, 352.
 Wheeler, Sir Mortimer, 283, 320, 322, 324¹, 328, 328^{6,7}, 329^{1,2}, 756.
 White, E. L., 366.
 Widengren, Geo, 763.
 Wilensky, E., 370, 371.
 Williams, M. V. Seton, see Seton Williams.
 Wilson, Horace Hayman, 159, 160.
 Winckler, Heinrich, 131.
 Winckler, Hugo, 332^{2,4}, 476⁴, 677¹, 767, 769.
 Wiseman, D. J., 344.
 Witsen, Nicolaes, 62³, 64, 70.
 Witte, S. S., 50³, 59, 188.
 Witzel, Maurus, 258, 260, 763, 770.
 Wood, Lynn H., 467, 467⁵.
 Woolley, Sir Leonard, 280, 287, 296, 311, 311⁴, 312², 314-315, 314^{1,2}, 316-317, 317, 320, 321, 323, 323², 324, 327-328, 328¹, 335, 336, 357, 358, 369, 402, 409, 413, 423¹, 425⁴, 426, 433¹, 435¹, 437, 466, 470, 475, 480, 482, 487, 499², 502², 575-576, 639-640, 649², 714, 720, 720¹, 753, 755, 764.
 Wright, G. Ernest, 758.
 Wright, Jr., Herbert E., 378, 379, 380, 381, 393¹, 394.
 Wu, G. D., 755.
 Zervos, Christian, 764.
 Zeuner, Frederick E., 386, 760.
 Ziegler, Ch., 414².
 Zimmern, Heinrich, 192, 708², 762, 770.
 Zimolong, B. F., 164, 731.
 Zoëga, Georglus (Georg), 95.



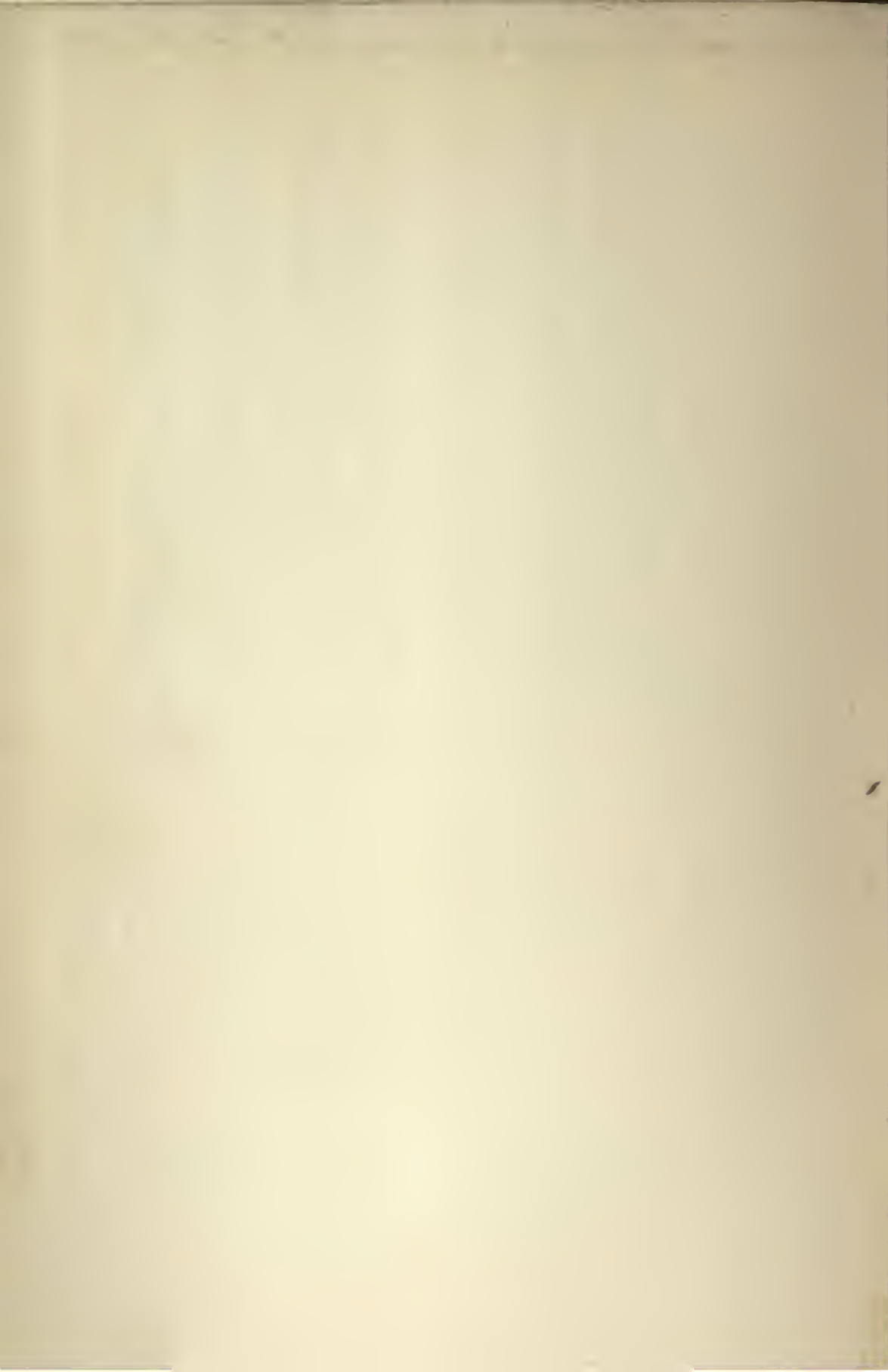
MAPS

No. 1.— The Kingdom of Iraq.

No. 2.— Near and Middle East: Ancient Sites (*Handbook to the Nicholson Museum*, University of Sydney, 2. ed. 1948).

PREHISTORIC SCHEMATIC SYNOPSIS

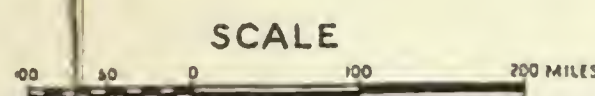
- I. Pleistocene–Holocene 1.
- II. Holocene 2.

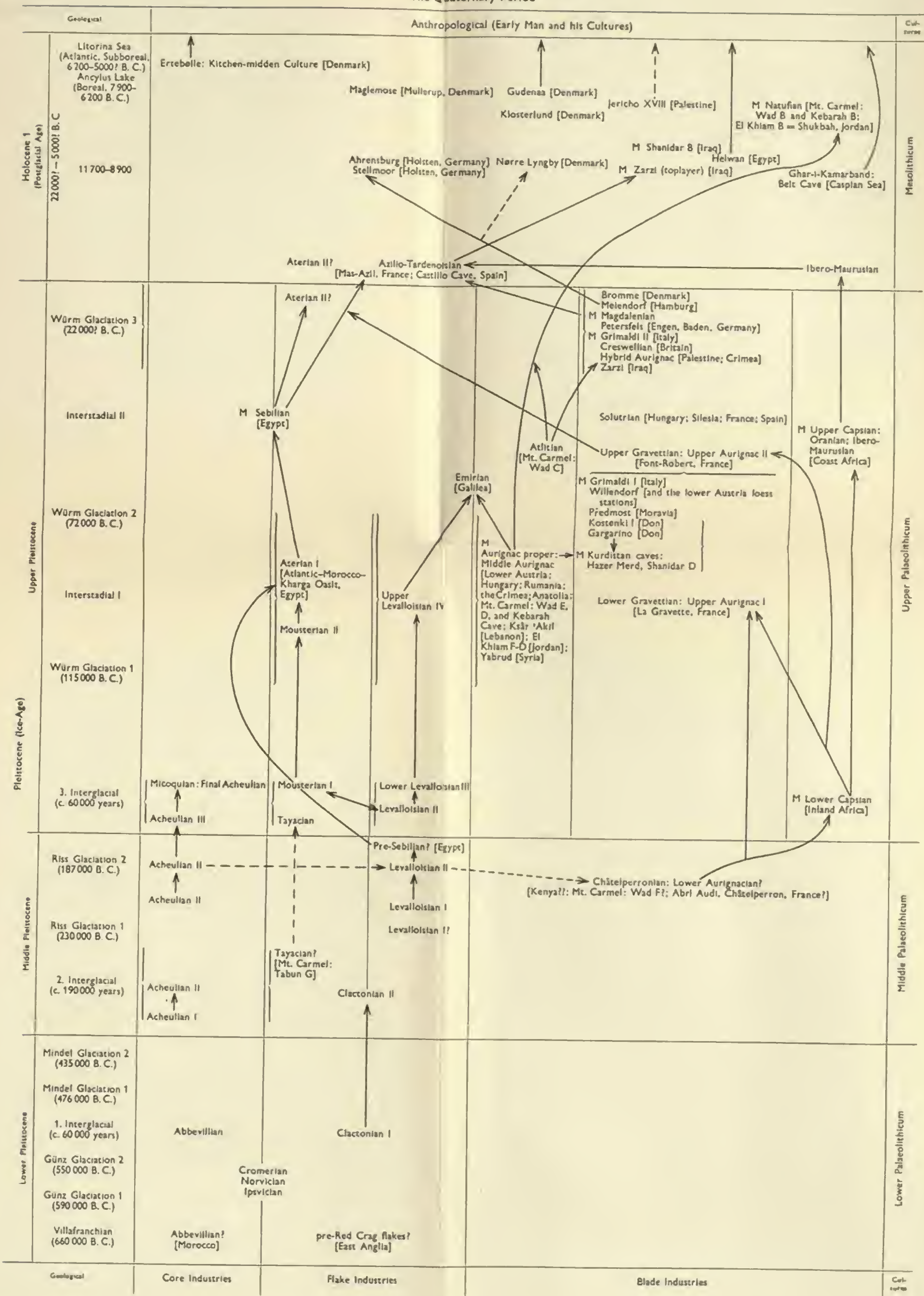






NEAR AND MIDDLE EAST ANCIENT SITES





The Quaternary Period

Geological	Anthropological				Cultures
	The Iron Age: 1. Hallstatt Period 2. La Tène Period 3. Roman 4. Post Roman				Iron
	The Bronze Age: 1. Chalcolithic Period 2. Early Period 3. Middle Period 4. Late Period				Bronze
	<p>Europe e.g.</p> <p>a. Spain</p> <p>Bell-beaker Culture</p> <p>b. Denmark (c. 3500-2000)</p> <p>Single Grave Culture: String-ceramic Culture</p> <p>Gudenas</p> <p>Ertebølle</p> <p>Dolmen Culture: Funnel-beaker Culture: Megalithic Culture</p> <p>(Egypt)</p> <p>Gerzean: Naqada II</p> <p>Amratian: Naqada I</p> <p>Badarian</p> <p>Tasian?</p> <p>Fayum A: Merimde</p> <p>Helwan</p> <p>(Jordan)</p> <p>Yarmukian</p> <p>Jericho IX</p> <p>Jericho XVII</p> <p>(Syria and Syro-Cilicia)</p> <p>Sakje Geuzi Mersin XIX-XXI 'Amuq C</p> <p>Mersin XXII-XXVI 'Amuq B</p> <p>Ras Shamra V Byblos A</p> <p>Mersin, lower 'Amuq A</p> <p>Hama L</p> <p>Hama M</p> <p>Chagar Bazar Halaf II</p> <p>Baghouz</p> <p>Halaf I</p> <p>(Iraq)</p> <p>Ubad Eridu</p> <p>Halafian Arpachiyah</p> <p>Samarra? Nineveh II a-b</p> <p>Matarrah II Hassuna II-VI</p> <p>Nineveh I Matarrah I Hassuna I-II</p> <p>Jarmo Karim Shahr</p> <p>(Iran)</p> <p>Bakun A: Susa I</p> <p>Sialk III Hissar I</p> <p>Sialk II Chashmah Ali</p> <p>Sialk I</p> <p>Bakun B I [Persepolis]</p> <p>Ghar-i-Kamarband</p>				
Holocene 2 5000? B.C. -	Neolithicum				



✓✓ Assyriology
Antiquity > < Iraq

24
-3
1
2/1/12
CENTRAL ARCHAEOLOGICAL LIBRARY,
NEW DELHI

Issue Record.

Catalogue No.

901.09352/Pal-6521

Author—Pallis, Svend Aage.

Title—Antiquity of Iraq.

Borrower No.

Date of Issue

Date of Return

"A book that is shut is but a block"

CENTRAL ARCHAEOLOGICAL LIBRARY
GOVT. OF INDIA
Department of Archaeology
NEW DELHI.

Please help us to keep the book
clean and moving.